

**Clean Copies of Kentucky's Water Quality Regulations
401 KAR 10:001; 10:026; 10:029; 10:030; and 10:031**

401 KAR 10:001. Definitions for 401 KAR Chapter 10.

RELATES TO: KRS 146.200-146.360, 146.410-146.535, 146.550-146.570, 146.600-146.619, 146.990, 224.01-010, 224.01-400, 224.16-050, 224.16-070, 224.70-100-224.70-140, 224.71-100-224.71-145, 224.73-100-224.73-120, 40 C.F.R. 136, EO 2008-507, 2008-531

STATUTORY AUTHORITY: KRS 224.10-100, 224.70-100, 224.70-110

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 authorizes the cabinet to promulgate administrative regulations for the prevention, abatement, and control of all water pollution. EO 2008-507 and 2008-531, abolish the Environmental and Public Protection Cabinet and establish the new Energy and Environment Cabinet. This administrative regulation establishes definitions for terms used in 401 KAR Chapter 10.

Section 1. Definitions. (1) "Acute-chronic ratio" means the ratio of the acute toxicity, expressed as an LC_{50} , of an effluent or a toxic substance, to its chronic toxicity. It is used as a factor to estimate chronic toxicity from acute toxicity data.

(2) "Acute criteria" means the highest instream concentration of a toxic substance or an effluent to which an organism can be exposed for one (1) hour without causing an unacceptable harmful effect.

(3) "Acute toxicity" means lethality or other harmful effect sustained by either an indigenous aquatic organism or a representative indicator organism used in a toxicity test, due to a short-term exposure, of ninety-six (96) hours or less, to a specific toxic substance or mixture of toxic substances.

(4) "Acute toxicity unit" means the reciprocal of the effluent dilution that causes the acute effect, or LC_{50} , by the end of the acute exposure period.

(5) "Adversely affect" or "adversely change" means to alter or change the community structure or function, to reduce the number or proportion of sensitive species, or to increase the number or proportion of pollution tolerant aquatic species so that aquatic life use support or aquatic habitat is impaired.

(6) "Balanced indigenous community" means a biotic community typically characterized by diversity, the capacity to sustain itself through cyclic seasonal changes, presence of necessary food chain species, and a lack of domination by pollution tolerant species. The community may include historically nonnative species introduced in connection with a program of wildlife management and species whose presence or abundance results from substantial, irreversible environmental modification. Normally such a community does not include species whose presence or abundance is attributable to the introduction of pollutants that will be eliminated by compliance of all sources with 401 KAR 5:065, and may not include species whose presence or abundance is attributable to alternative effluent limitations imposed pursuant to 401 KAR 5:055.

(7) "Best management practices" or "BMPs" means:

(a) For agriculture operations, as defined by KRS 224.71-100(3); or

(b) For all other purposes:

1. Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the commonwealth; and

2. Include treatment requirements, operating procedures, practices to control site run-off, pollution of surface water and groundwater from nonpoint sources, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

(8) "Biochemical oxygen demand", "BOD", or "BOD₅" means the amount of oxygen required to stabilize biodegradable organic matter under aerobic conditions within a five (5) day period. Other time periods may be measured, and if so, are indicated where the term is used.

(9) "Carbonaceous biochemical oxygen demand" or "CBOD" means BOD, not including the nitrogenous oxygen demand of the wastewater.

(10) "Chronic criteria" means the highest instream concentration of a toxic substance or an effluent to which organisms are able to be exposed for ninety-six (96) hours without causing an unacceptable harmful effect.

(11) "Chronic toxicity" means lethality, reduced growth or reproduction, or other harmful effect sustained by either indigenous aquatic organisms or representative indicator organisms used in toxicity tests due to long-term exposures, relative to the life span of the organisms or a significant portion of their life span, to toxic substances or mixtures of toxic substances.

(12) "Chronic toxicity unit" means the reciprocal of the effluent dilution that causes twenty-five (25) percent inhibition of growth or reproduction to the test organisms by the end of the chronic exposure period.

(13) "Clean Water Act" or "CWA" means the Clean Water Act as subsequently amended, 33 U.S.C. Section 1251 through 1387, otherwise known as the Federal Water Pollution Control Act.

(14) "Coal remining operation" means:

(a) A surface coal mining operation, which begins after July 11, 1990, at a site on which a coal mining operation was conducted before August 3, 1977; and

(b) A surface coal mining operation existing on July 11, 1990, which receives a permit revision from the Department for Surface Mining Reclamation and Enforcement (DSMRE) in accordance with 405 KAR 8:010, Section 20, for a site on which a coal mining operation was conducted before August 3, 1977.

(15) "Cold water aquatic habitat" or "CAH" means surface waters and associated substrate that are able to support indigenous aquatic life or self-sustaining or reproducing trout populations on a year-round basis.

(16) "Concentrated animal feeding operation" means one (1) of the following:

(a) "Large concentrated animal feeding operation" as defined in subsection (45) of this section;

(b) "Medium concentrated animal feeding operation" as defined in subsection (5) of this section; or

(c) "Small concentrated animal feeding operation" as defined in subsection (76) of this section.

(17) "Conventional domestic water supply treatment" means or includes coagulation, sedimentation, filtration, and disinfection.

(18) "Conventional pollutant" means biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), total suspended solids (TSS), ammonia (as N), bromide, chlorine (total residual), color, fecal coliform, fluoride, nitrate, kjeldahl nitrogen, oil and grease, and phosphorus.

(19) "Criteria" means specific concentrations or ranges of values, or narrative statements of water constituents that represent a quality of water expected to result in an aquatic ecosystem protective of designated uses of surface waters. Criteria are derived to protect legitimate uses such as aquatic life, domestic water supply, and recreation and to protect human health.

(20) "Day" means a twenty-four (24) hour period.

(21) "Discharge" or "discharge of a pollutant" means the addition of a pollutant or combination of pollutants to waters of the commonwealth from a point source.

(22) "Division" means the Kentucky Division of Water, within the Department for Environmental Protection, Energy and Environment Cabinet.

(23) "Domestic" means relating to household wastes or other similar wastes. It is used to distinguish municipal, household, or commercial

water or wastewater services from industrial water or wastewater services.

(24) "Domestic sewage" means sewage devoid of industrial or other wastes and that is typical of waste received from residential facilities. It may include wastes from commercial developments, schools, restaurants, and other similar developments.

(25) "Domestic water supply" or "DWS" means surface waters that with conventional domestic water supply treatment are suitable for human consumption through a public water system as defined in 401 KAR 8:010, culinary purposes, or for use in a food or beverage processing industry; and meet state and federal regulations under the Safe Drinking Water Act, as amended, 42 U.S.C. 300f - 300j-26.

(26) "Effluent limitations" is defined at KRS 224.01-010(12).

(27) "Environmental Protection Agency" or "EPA" means the United States Environmental Protection Agency.

(28) "Epilimnion" means the thermally homogeneous water layer overlying the metalimnion of a thermally stratified lake or reservoir.

(29) "E. coli" or "Escherichia coli" means an aerobic and facultative anaerobic gram negative, nonspore forming, rod shaped bacterium that can grow at forty-four and five tenths (44.5) degrees Celsius, that is ortho-nitrophenyl-B-D-galactopyranoside (ONPG) positive, and Methylumbelliferyl glucuronide (MUG) positive. It is a member of the indigenous fecal flora of warm-blooded animals.

(30) "Eutrophication" means the enrichment of a surface water by the discharge or addition of a nutrient.

(31) "Exceptional water" means a surface water categorized as exceptional by the cabinet pursuant to 401 KAR 10:030.

(32) "Existing use" means a legitimate use being attained in or on a surface water of the commonwealth on or after November 28, 1975, irrespective of its use designation.

(33) "Expanded discharge" means an increase in pollutant loading of twenty (20) percent or greater.

(34) "°F" means degrees Fahrenheit.

(35) "General permit" means a KPDES permit authorizing a category of discharges under KRS Chapter 224 within a geographical area, issued under 401 KAR 5:055.

(36) "Harmonic mean flow" means the reciprocal of the mean of the reciprocal daily flow values.

(37) "High quality water" means a surface water categorized as high quality by the cabinet pursuant to 401 KAR 10:030.

(38) "Impact" means a change in the chemical, physical, or biological quality or condition of a surface water.

(39) "Impairment" means a detrimental impact to a surface water that prevents attainment of a designated use.

(40) "Indigenous aquatic community" means naturally occurring aquatic organisms including bacteria, fungi, algae, aquatic insects, other aquatic invertebrates, reptiles, amphibians, and fishes. Under some natural conditions one (1) or more of the above groups may be absent from a surface water.

(41) "Inhibition concentration of twenty-five (25) percent" or "IC₂₅" means the concentration that is determined by a linear interpolation method for estimating the concentration at which a twenty-five (25) percent reduction is shown in reproduction or growth in test organisms, and which statistically approximates the concentration at which an unacceptable chronic effect is not observed.

(42) "Intermittent water" means a stream that flows only at certain times of the year.

(43) "Kentucky Pollutant Discharge Elimination System" or "KPDES" means the Kentucky program for issuing, modifying, revoking and reissuing, revoking, monitoring and enforcing permits to discharge, and imposing and enforcing pretreatment requirements.

(44) "KPDES permit" means a Kentucky Pollutant Discharge Elimination System permit issued to a facility, including a POTW, or activity pursuant to KRS Chapter 224 for the purpose of operating the facility or activity.

(45) "Large concentrated animal feeding operation" is defined by 40 C.F.R. 122.23(b)(4), effective July 1, 2007.

(46) "LC₁" means that concentration of a toxic substance or mixture of toxic substances that is lethal, or immobilizing if appropriate, to one (1) percent of the organisms tested in a toxicity test during a specified exposure period.

(47) "LC₅₀" means that concentration of a toxic substance or mixture of toxic substances that is lethal, or immobilizing if appropriate, to fifty (50) percent of the species tested in a toxicity test during a specified exposure period.

(48) "Maintain" means to preserve or keep in present condition by not allowing an adverse permanent or long-term change to water quality or to a population of an aquatic organism or its habitat.

(49) "Measurement" means the ability of the analytical method or protocol to quantify as well as identify the presence of the substance in question.

(50) "Medium concentrated animal feeding operation" is defined by 40 C.F.R. 122.23(b)(6), effective July 1, 2007.

(51) "µg/l" means micrograms per liter, same as ppb, assuming unit density.

(52) "mgd" or "MGD" means million gallons per day.

(53) "Milligrams per liter" or "mg/l" means the milligrams of substance per liter of solution, and is equivalent to parts per million in water, assuming unit density.

(54) "Mixing zone" means a domain of a water body contiguous to a treated or untreated wastewater discharge with quality characteristics different from those of the receiving water. The discharge is in transit and progressively diluted from the source to the receiving system. The mixing zone is the domain where wastewater and receiving water mix.

(55) "Natural temperature" means the temperature that would exist in waters of the commonwealth without the change of enthalpy of artificial origin, as contrasted with that caused by climatic change or naturally occurring variable temperature associated with riparian vegetation and seasonal changes.

(56) "Natural water quality" means those naturally occurring physical, chemical, and biological properties of waters.

(57) "Net discharge" means the amount of substance released to a surface water by excluding the influent value from the effluent value if both the intake and discharge are from and to the same or similar body of water.

(58) "Nonconventional pollutant" means a pollutant not considered to be a conventional pollutant, including priority pollutants identified in 401 KAR 5:060.

(59) "Nonpoint" means any source of pollutants not defined by a point source.

(60) "Other wastes" means sawdust, bark or other wood debris, garbage, refuse, ashes, offal, tar, oil, chemicals, acid drainage, wastes from agricultural enterprises, and other foreign substances not included within the definitions of industrial wastes and sewage that may cause or contribute to the pollution of waters of the Commonwealth.

(61) "Outstanding national resource water" means a surface water categorized by the cabinet as an outstanding national resource water pursuant to 401 KAR 10:030.

(62) "Outstanding state resource water" means a surface water designated by the cabinet as an outstanding state resource water pursuant to 401 KAR 10:031.

(63) "pCi/l" means picocuries per liter.

(64) "PCR" means primary contact recreation.

(65) "Point source" is defined by 33 U.S.C. 1362(14). The term does not include agricultural storm water run-off or return flows from irrigated agriculture.

(66) "POTW" means publicly-owned treatment works as defined in KRS 224.01-010.

(67) "Primary contact recreation water" means those waters suitable for full body contact recreation during the recreation season of May 1

through October 31.

(68) "Productive aquatic community" means an assemblage of indigenous aquatic life capable of reproduction and growth.

(69) "Propagation" means the continuance of a species by successful spawning, hatching, and development or natural generation in the natural environment, as opposed to the maintenance of the species by artificial culture and stocking.

(70) "Regional facility plan" means a type of water quality management plan addressing point sources of pollution for the purpose of ~~areawide waste treatment management planning prepared by the designated regional planning agency pursuant to Section 201, 205, and 208~~ of the Clean Water Act, 33 U.S.C. 1251-1387, to control point sources of pollution within a planning area.

(71) "Remined area" means only that area of a coal remining operation on which a coal mining operation was conducted before August 3, 1977.

(72) "Representative indicator organism" means an aquatic organism designated for use in toxicity testing because of its relative sensitivity to toxicants and its widespread distribution in the aquatic environment.

(73) "SCR" means secondary contact recreation.

(74) "Secondary contact recreation waters" means those waters suitable for partial body contact recreation, with minimal threat to public health due to water quality.

(75) "Seven-Q-ten" or "7Q₁₀" means that minimum average flow which occurs for seven (7) consecutive days with a recurrence interval of ten (10) years.

(76) "Small concentrated animal feeding operation" is defined by 40 C.F.R. 122.23(b)(9), effective July 1, 2007.

(77) "Source" means a building, structure, facility, or installation from which there is or may be a discharge of pollutants.

(78) "Standard" means a water quality standard.

(79) "Stormwater" means stormwater run-off, snow melt run-off, and surface run-off and drainage.

(80) "Surface waters" means those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the commonwealth.

(81) "Total dissolved solids" or "TDS" means the total dissolved solids (filterable residue) as determined by use of the method specified in 40 C.F.R. Part 136.

(82) "Total suspended solids" or "TSS" means the total suspended solids (nonfilterable residue) as determined by use of the method specified in 40 C.F.R. Part 136.

(83) "Toxic substance" means a substance that is bioaccumulative, synergistic, antagonistic, teratogenic, mutagenic, or carcinogenic and causes death, disease, a behavioral abnormality, a physiological malfunction, or a physical deformity in an organism or its offspring or interferes with normal propagation.

(84) "U.S. EPA" means the United States Environmental Protection Agency.

(85) "Warm water aquatic habitat" or "WAH" means a surface water and associated substrate capable of supporting indigenous warm water aquatic life.

(86) "Wetlands" means land that has a predominance of hydric soils and that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.

(87) "Zone of initial dilution" means the limited area permitted by the cabinet surrounding or downstream from a discharge location where rapid, first-stage mixing occurs. The zone of initial dilution is the domain where wastewater and receiving water initially mix. (35 Ky.R. 208; Am. 856; 1452; eff. 1-5-2009.)

The first part of the paper discusses the importance of maintaining accurate records of all transactions. It is essential for the company to have a clear and concise record of all financial activities, including sales, purchases, and expenses. This will allow the company to track its performance over time and identify areas for improvement.

The second part of the paper discusses the importance of maintaining accurate records of all assets. This includes both tangible and intangible assets, such as property, equipment, and intellectual property. The company should have a clear and concise record of all assets, including their location, condition, and value. This will allow the company to track its assets over time and identify areas for improvement.

The third part of the paper discusses the importance of maintaining accurate records of all liabilities. This includes both short-term and long-term liabilities, such as accounts payable and loans. The company should have a clear and concise record of all liabilities, including their terms, conditions, and amounts. This will allow the company to track its liabilities over time and identify areas for improvement.

The fourth part of the paper discusses the importance of maintaining accurate records of all equity. This includes both common and preferred equity, as well as any other equity interests in the company. The company should have a clear and concise record of all equity, including the names of the holders, the amounts of their shares, and the dates of their acquisitions. This will allow the company to track its equity over time and identify areas for improvement.

The fifth part of the paper discusses the importance of maintaining accurate records of all income and expenses. This includes both operating and non-operating income and expenses, as well as any other income and expenses that the company may have. The company should have a clear and concise record of all income and expenses, including the amounts, dates, and descriptions of each item. This will allow the company to track its income and expenses over time and identify areas for improvement.

The sixth part of the paper discusses the importance of maintaining accurate records of all taxes. This includes both federal and state taxes, as well as any other taxes that the company may be subject to. The company should have a clear and concise record of all taxes, including the amounts, dates, and descriptions of each item. This will allow the company to track its taxes over time and identify areas for improvement.

The seventh part of the paper discusses the importance of maintaining accurate records of all other financial information. This includes any other financial information that the company may have, such as bank statements, credit card statements, and insurance policies. The company should have a clear and concise record of all other financial information, including the amounts, dates, and descriptions of each item. This will allow the company to track its other financial information over time and identify areas for improvement.

In conclusion, the paper emphasizes the importance of maintaining accurate records of all financial information. This is essential for the company to track its performance over time and identify areas for improvement. The paper provides a clear and concise record of all financial activities, assets, liabilities, equity, income and expenses, taxes, and other financial information. This will allow the company to track its financial information over time and identify areas for improvement.

401 KAR 10:026. Designation of uses of surface waters.

RELATES TO: KRS 146.200-146.360, 146.410-146.535, 146.550-146.570, 146.600-146.619, 146.990, 224.01-010, 224.01-400, 224.16-050, 224.16-070, 224.70-100-224.70-140, 224.71-100-224.71-145, 224.73-100 - 224.73-120, EO 2008-507, 2008-531

STATUTORY AUTHORITY: KRS 146.220, 146.241, 146.270, 146.410, 146.450, 146.460, 146.465, 224.10-100, 224.16-050, 224.16-060, 224.70-100, 224.70-110, 40 C.F.R. Part 131, 16 U.S.C. 1271-1287, 1531-1544, 33 U.S.C. 1311, 1313, 1314, 1316, 1341

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 requires the cabinet to develop and conduct a comprehensive program for the management of water resources and to provide for the prevention, abatement, and control of pollution. This administrative regulation and 401 KAR 10:001, 10:029, 10:030, and 10:031 establish procedures to protect the surface waters of the Commonwealth, and thus protect water resources. EO 2008-507 and 2008-531, effective June 16, 2008, abolish the Environmental and Public Protection Cabinet and establish the new Energy and Environment Cabinet. This administrative regulation applies the designated uses described in 401 KAR 10:031 to the surface waters of the Commonwealth. This administrative regulation also makes all surface waters subject to the general criteria specified in 401 KAR 10:031, Section 2.

Section 1. Scope of Designation. (1) Surface waters listed in this administrative regulation shall be designated for all legitimate uses contained in KRS 224.70-100(1) except as specified in 401 KAR 10:031, Sections 5 and 8, or until redesignated in accordance with the procedures of this administrative regulation.

(2) Designated uses are:

- (a) Warm water aquatic habitat;
- (b) Cold water aquatic habitat;
- (c) Primary contact recreation;
- (d) Secondary contact recreation;
- (e) Domestic water supply; and
- (f) Outstanding state resource water.

(3) Listed waters shall meet all criteria applicable to their designated uses and those criteria listed in 401 KAR 10:031, Section 2, unless the cabinet grants an exception pursuant to 401 KAR 10:031, Section 10 or 11.

(4) Outstanding state resource waters may have unique water quality characteristics that shall be protected by additional criteria established in 401 KAR 10:031, Section 8.

Section 2. Redesignation of Surface Water Uses. (1)(a) Surface waters may be redesignated only upon affirmative findings by the cabinet pursuant to Sections 3 and 4 of this administrative regulation.

(b) Before redesignating a surface water, the cabinet shall provide notice and an opportunity for a public hearing.

(2) In redesignating a surface water, the cabinet shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream surface waters.

(3) A designated use shall not be removed for a surface water if that use is an existing use, or if the use may be attained by implementing effluent limitations required under Sections 301(b) and 306 of the Clean Water Act, 33 U.S.C. 1311(b) and 1316, and by implementing cost-effective best management practices for nonpoint source control.

(4) If a surface water is designated for a use that is not an existing use, the cabinet shall redesignate the surface water upon demonstration that the designated use is unattainable because:

- (a) Naturally occurring pollutant concentrations prevent the attainment of the use;
- (b) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges;
- (c) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place;
- (d) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the surface water to its original condition or to operate the modification in a way that would result in the attainment of the use;
- (e) Physical conditions related to the natural features of the surface water, but unrelated to water quality, preclude attainment of the aquatic life use, such as the lack of a proper substrate, cover, flow, depth, pools, or riffles; or
- (f) Controls more stringent than those required by Sections 301(b) and 306 of the Clean Water Act, 33 U.S.C. 1311(b) and 1316, would

result in substantial and widespread economic and social impact as determined by the guidelines in Interim Economic Guidance for Water Quality Standards Workbook, EPA, March 1995.

(5) Redesignations shall be consistent with the antidegradation provisions of 401 KAR 10:029 and 10:030.

Section 3. Documentation for Redesignations. (1)(a) A person may request redesignation of surface water uses by petition to the cabinet.

(b) The petitioner shall provide the cabinet with the documentation required in subsection (3) of this section and shall have the burden of proof that the redesignation is appropriate.

(2)(a) The cabinet may propose redesignations of surface water uses.

(b) The cabinet shall provide documentation for those surface waters that it proposes for use redesignation.

(3) Documentation to support the redesignation of a surface water of the Commonwealth shall be:

(a) A United States Geological Survey 7.5 minute topographic map or its equivalent showing those surface waters to be redesignated, with a description consisting of a river mile index with existing and proposed discharge points;

(b) Existing uses and water quality data for the surface waters for which the redesignation is proposed. If adequate data are unavailable, additional studies shall be required by the cabinet;

(c) Descriptions of general land uses and specific land uses adjacent to the surface waters for which the redesignation is proposed;

(d) The existing and designated uses of the downstream waters into which the surface water under consideration discharges;

(e) General physical characteristics of the surface water including width, depth, bottom composition, and slope;

(f) The frequency of occasions when there is no natural flow in the surface water and the 7Q₁₀ and harmonic mean flow values for the surface water and adjacent surface waters;

(g) An assessment of the existing and potential aquatic life habitat in the surface waters under consideration and the adjacent upstream surface waters.

1. The existing aquatic life shall be documented and livestock and natural wildlife dependence on the surface water shall be assessed.

2. The occurrence of individuals or populations, indices of diversity and well-being, and abundance of species of any unique native biota shall be documented;

(h) The proposed designated uses for the surface water in question; and

(i) An explanation of the irretrievable person-induced, or natural conditions that preclude attainment of a higher use designation or an assessment of the substantial and widespread social and economic impacts resulting from the imposition of additional controls necessary for existing point sources, beyond the most stringent effluent limitation levels normally required for the sources.

Section 4. Procedures for Redesignation. (1) For each of the surface waters for which a redesignation is proposed, the cabinet or petitioner shall prepare a fact sheet containing the following information:

(a) The name and address of the petitioner;

(b) The name and sketch or description of the surface water proposed for specified use redesignations, including the location of existing and proposed dischargers;

(c) The proposed use redesignations;

(d) A brief abstract of the supportive documentation, which demonstrates that the redesignation is appropriate;

(e) The appropriate water quality criteria for the surface water based on the proposed designated use;

(f) The treatment requirements proposed for discharges to the surface water in question if designated for the proposed use; and

(g) A "plain English" summary of the implications of the designation for the community and other users or potential users of the surface water in question.

(2) The cabinet shall document the determination to propose or deny redesignation as a result of a petition, and shall provide a copy of the decision to the petitioner and other interested parties.

Section 5. Surface Water Use Designations. (1) Listed in the tables below are the use designations for specific surface waters of the Commonwealth. The county column indicates the county in which the mouth or outlet of the surface water is located. The identifying symbols for use designations are listed in table A of this section.

Table A: Use Designation Symbols	
WAH	Warm Water Aquatic Habitat
CAH	Cold Water Aquatic Habitat

PCR	Primary Contact Recreation
SCR	Secondary Contact Recreation
DWS	Domestic Water Supply, applicable at existing points of public water supply intake
OSRW	Outstanding State Resource Water

(2)(a) Surface waters not specifically listed in this section are designated for the uses of warm water aquatic habitat, primary contact recreation, secondary contact recreation and domestic water supply in accordance with Section 1 of this administrative regulation.

(b) Domestic water supply criteria in 401 KAR 10:031, Section 6, are implemented at locations listed in Table B in this paragraph.

Table B: SURFACE WATER INTAKES FOR DOMESTIC WATER SUPPLY USE		
Name	Description	County
BIG SANDY RIVER BASIN		
Elkhorn City Water Department	Mile 13.7 of Russell Fork	Pike
Paintsville Utilities Commission	Mile 38.9 of Levisa Fork	Johnson
Louisa Municipal Water Works	Mile 0.6 of Levisa Fork	Lawrence
Prestonsburg City Utilities Commission	Mile 57.5 of Levisa Fork	Floyd
Pikeville Water Works/US Filter	Mile 88.2 of Levisa Fork	Pike
Martin County Water District #1	Mile 23.8 of Tug Fork	Martin
US Filter/Southern Water & Sewer District	Mile 65.4 of Levisa Fork	Floyd
Jenkins Water Works	Mile 0.2 of Little Elkhorn Creek (Elkhorn Lake)	Letcher
Mountain Water District	Mile 4.6 of Russell Fork	Pike
Martin County Water District #1	Mile 23.8 of Tug Fork	Martin
Jenkins Water Works	Mile 24.1 of Elkhorn Creek	Letcher
Little Sandy River Basin		
Grayson Utility Commission	Mile 40.1 of Little Sandy River	Carter
Greenup Water Plant	Mile 0.7 of Little Sandy River	Greenup
Tygarts Creek Basin		
Olive Hill Water Works	Mile 2.2 of Perry Branch (Olive Hill Reservoir)	Carter
Olive Hill Water Works	Mile 81.1 of Tygarts Creek	Carter
Upper Cumberland River Basin		
Water Service Corporation of KY	Mile 3.2 of Little Yellow Creek (Fern Lake)	Bell
Somerset Water Service	Mile 513.6 of Cumberland River (Lake Cumberland)	Pulaski
Corbin City Utilities Commission	Mile 17.3 of Laurel River (City Reservoir)	Laurel
Burnside Water Company	Mile 517.6 of Cumberland River (Lake Cumberland)	Pulaski
Albany Municipal Water Works Plant A	Mile 7.0 of Indian Creek (Lake Cumberland)	Clinton
Monticello Water & Sewer Commission	Mile 502.2 of Cumberland River (Lake Cumberland)	Wayne

	Cumberland	
London Utility Commission	Mile 1.2 of Indian Camp Creek (Laurel River Reservoir)	Laurel
Harlan Municipal Water Works	Mile 0.2 of Poor Fork	Harlan
Mt Vernon Municipal Water Works	Mile 3.3 of Renfro Creek (Lake Linville)	Rockcastle
Laurel County Water Department #2	Mile 23.9 of Laurel River (Dorthea Dam)	Laurel
McCreary County Water District Plant A	Mile 8.9 of Laurel Creek (Laurel Creek Reservoir)	McCreary
Burkesville Municipal Water Works	Mile 427.05 of Cumberland River	Cumberland
Mckee Municipal Water Works	Mile 2.3 of Bills Branch (Mckee City Reservoir)	Jackson
Williamsburg Water Works	Mile 584.15 of Cumberland River	Whitley
Jamestown Municipal Water Works	Mile 3.9 of Greasy Creek Branch (Lake Cumberland)	Russell
Jackson County Water Association Inc	Mile 2.1 of Flat Lick Creek (Beulah Lake)	Jackson
Knox County Utility Commission	Mile 642.61 of Cumberland River	Knox
Wood Creek Water District	Mile 7.2 of Wood Creek (Wood Creek Lake)	Laurel
Cumberland Water Works	Mile 25.2 of Poor Fork	Harlan
Pineville Water System	Mile 3.2 of Cannon Creek (Cannon Creek Lake)	Bell
Benham Water Works	Mile 3.5 of Looney Creek	Harlan
Woodson Bend Resort	Mile 2.98 of South Fk. Cumberland River (Lake Cumberland)	Pulaski
Barbourville Utility Commission	Mile 1.3 of Indian Camp Creek (Laurel River Lake)	Laurel
Cawood Water District	Mile 11.0 of Martins Fork	Harlan
Cumberland County Water District	Mile 419.7 of Cumberland River	Cumberland
Ky Parks Cumberland Falls	Mile 562.5 of Cumberland River	Whitley
Barbourville Utility Commission	Mile 635.5 of Cumberland River	Knox
Albany Municipal Water Works Plant B	Mile 6.7 of Indian Creek (Lake Cumberland)	Clinton
McCreary County Water District Plant B	Mile 31.0 of South Fork Cumberland River (Lake Cumberland)	McCreary
Evarts Municipal Water Works	Mile 0.1 on UT of Bailey Creek, UT at mile 0.6	Harlan
Evarts Municipal Water Works	Mile 1.0 of Bailey Creek	Harlan
Bell County Forestry Camp	Mile 0.2 of Bear Creek (Chenoe Lake)	Bell

Licking River Basin		
Millersburg Municipal Water Works	Mile 13.3 of Hinkston Creek	Bourbon
Paris Municipal Water Works	Mile 16.7 of Stoner Creek	Bourbon
Northern Ky Water Service District Plant A	Mile 4.8 of Licking River	Kenton
Mt Sterling Water & Sewer System	Mile 36.1 of Slate Creek at mile 36.1 (Reservoir)	Montgomery
Cynthiana Municipal Water Works	Mile 51.2 of South Fork Licking River	Harrison
Flemingsburg Utilities	Mile 0.7 of UT to Town Branch (Flemingsburg Lake)	Fleming
Williamstown Municipal Water	Mile 1.89 of Lake Branch (Lake Williamstown)	Grant
Morehead State University Water Plant	Mile 0.7 of Evans Branch (Evans Branch Impoundment)	Rowan
Morehead State University Water Plant	Mile 13.7 of Triplets Creek	Rowan
Carlisle Municipal Water Plant	Mile 3.5 of UT to Brushy Fork (City Lake)	Nicholas
Falmouth Water Plant	Mile 52.7 of Licking River	Pendleton
Morehead Utility Plant Board	Mile 177.7 of Licking River	Rowan
West Liberty Water Company	Mile 228.6 of Licking River	Morgan
Western Fleming Water District	Mile 102.5 of Licking River	Nicholas
Salyersville Municipal Water Works	Mile 273.2 of Licking River	Magoffin
Cynthiana Municipal Water Works	Mile 84.5 of Licking River	Harrison
Flemingsburg Utilities	UT of Town Branch at mile 1.6 (Old Reservoir)	Fleming
Flemingsburg Utilities	Mile 131.8 of Licking River	Fleming
Carlisle Municipal Water Department	Mile 110.2 Licking River	Nicholas
West Liberty Water Company	Mile 3.9 of North Fork Licking River (Cave Run Lake)	Rowan
Cave Run Water Commission	Mile 197.4 of Licking River (Cave Run Lake)	Menifee
Rattlesnake Ridge Water District	Mile 57.4 of Little Sandy River (Grayson Lake)	Elliott
Kentucky River Basin		
Lancaster Municipal Water Works	Mile 145.2 of Kentucky River (Pool #8)	Garrard
Northpoint Training Center	Mile 17.3 of Dix River (Herrington Lake)	Boyle
Frankfort Electric & Water Plant Board	Mile 71.7 of Kentucky River (Pool #4)	Franklin
Hazard Water Department	Mile 104.1 of North Fork Kentucky River	Perry
Wilmore Utilities System	Mile 117.2 of Kentucky River (Pool #6)	Jessamine
Nicholasville Water Works	Mile 157.9 of Kentucky River	Jessamine

	(Pool #8)	
Berea Municipal Utilities	Mile 3.6 of Cowbell Creek Cowbell Lake	Madison
Jackson Municipal Water Works	Mile 47.2 of North Fork Kentucky River	Breathitt
Kentucky American Water Company Plant A	Mile 171.5 of Kentucky River (Pool #9)	Fayette
Kentucky American Water Company Plant B	Mile 10.6 of East Hickman Creek (Reservoir #4)	Fayette
Kentucky American Water Company	Reservoir #1 (Lake Ellerslie)	Fayette
Danville Water Works	Mile 18.9 of Dix River (Herrington Lake)	Boyle
Lawrenceburg Municipal Water Works	Mile 86.2 of Kentucky River	Anderson
Versailles Municipal Water Works	Mile 87.7 of Kentucky River (Pool 5)	Woodford
Harrodsburg Municipal Water Works	Mile 121.0 of Kentucky River (Pool 7)	Mercer
Stanford Water Works	Mile 6.0 of Neals Creek (Rice Lake)	Lincoln
Richmond Utilities Board	Mile 206.49 of Kentucky River (Pool 11)	Madison
Whitesburg Municipal Water Works/Veolia Water	Mile 150.9 of North Fork Kentucky River	Letcher
Manchester Water Works	Mile 3.9 of Beech Creek (Bert Combs Lake)	Clay
Georgetown Municipal Water & Sewer	Mile 33.5 of North Elkhorn Creek	Scott
Beattyville Water Works	Mile 1.3 of North Fork Kentucky River (Pool #14)	Lee
Bullock Pen Water District	Mile 2.8 Of Bullock Pen Creek (Bullock Pen Lake)	Grant
Ky Parks Natural Bridge State Park	Mile 0.11 of Mill Creek (Mill Creek Lake)	Powell
Winchester Municipal Utilities	Mile 6.5 of Lower Howard Creek (Winchester Reservoir {Carol E. Ecton Reservoir})	Clark
Winchester Municipal Utilities	Mile 1180.8 of Kentucky River (Pool #10)	Clark
Campton Water Works	Mile 0.3 of Hiram Branch (Campton Lake)	Wolfe
Hyden-Leslie County Water District	Mile 75.4 of Middle Fork Kentucky River (Buckhorn Reservoir)	Leslie
Booneville Water & Sewer District	Mile 12.8 of South Fork Kentucky River	Owsley
Georgetown Municipal Water & Sewer	Mile 0.61 of UT (Royal Springs) at mile 33.5 of North Elkhorn Creek	Scott

Owenton Water Works	Mile 0.6 of Severn Creek	Owen
Owenton Water Works	Mile 1.1 of UT to North Severn Creek at mile 5.5 (Lower Thomas Lake)	Owen
Irvine Municipal Utilities	Mile 223.4 of Kentucky River (Pool #11)	Estill
Bluegrass Army Depot	Mile 0.4 of Little Muddy Creek (Lake Vega)	Madison
Beech Fork Water Commission	Mile 0.3 of Beech Fork (Beech Fork Reservoir)	Powell
Berea Municipal Utilities	Mile 2.1 of East Fork Silver Creek (Lower Silver Creek Lake)	Madison
Berea Municipal Utilities	Mile 2.8 of East Fork Silver Creek (Upper Silver Creek Lake)	Madison
Berea Municipal Utilities	Mile 2.5 of Owsley Fork (Owsley Fork Lake)	Madison
Manchester Water Works	Mile 18.9 of Goose Creek	Clay
Blackey Municipal Water Works	Mile 131.0 of North Fork Kentucky River	Letcher
Beech Fork Water Commission	Mile 31.0 of Red River	Powell
Salt River Basin		
Shelbyville Municipal Water & Sewer Commission	Mile 28.0 of Guist Creek (Guist Creek Lake)	Shelby
Bardstown Municipal Water Works	Mile 1.1 of Buffalo Creek (Lake Sympson)	Nelson
Lebanon Water Works Company	Mile 98.2 of Rolling Fork River	Marion
Springfield Water Works	Mile 4.2 of Long Lick Creek (Willisburg Lake)	Washington
Lebanon Water Works Company	Mile 1.0 of Fagan Branch (Fagan Branch Reservoir)	Marion
Springfield Water Works	Mile 1.3 of Allen Branch (Springfield Reservoir)	Washington
Green River Basin		
Hidden Valley Springs	Mile 0.4 of Hidden Valley Spring of UT to Rock Creek at mile 5.9	Grayson
Morgantown Utilities Commission	Mile 144.8 of Green River	Butler
Campbellsville Water Works	Mile 1.3 of Trace Fork (City Reservoir)	Taylor
Columbia Utilities Commission	Mile 42.7 of Russell Creek	Adair
Glasgow Water Co/Plant B	Mile 22.4 of Beaver Creek	Barren
Greensburg Municipal Water Works	Mile 283.5 of Green River	Green
Livermore Water Works	Mile 71.9 of Green River	McLean
Elizabethtown Municipal Water Works A	From Old City Spring at mile 10.6 of Valley	Hardin

	Creek	
Elizabethtown Municipal Water Works A	Gaithers Station Spring at mile 6.9 of Valley Creek	Hardin
Bowling Green Municipal Utilities	Mile 38.1 of Barren River	Warren
Green River Valley Water District	Rio Springs at UT to Green River at mile 240.6	Hart
Hodgenville Water Works	Mile 5.8 of North Fork Nolin River	Larue
Hardinsburg/Us Filter	Tules Creek at mile 1.2 (Rough River Reservoir)	Breckinridge
Central City Municipal Water & Sewer	Mile 86.0 of Green River	Muhlenberg
Calhoun Water Works	Mile 63.9 of Green River	McLean
Hartford Municipal Water Works	Mile 29.8 of Rough River	Ohio
Greenville Utilities Commission	Luzerne Lake (Luzerne Lake no longer connected to Caney Creek at mile 2.3)	Muhlenberg
Ohio County Water Plant	Mile 131.9 of Green River	Ohio
Franklin Water Plant	Mile 23.4 of West Fork Drake's Creek	Simpson
Glasgow Water Co/Plant A	Mile 86.8 of Barren River (Barren River Reservoir)	Barren
Leitchfield Municipal Water Works	Mile 107.7 of Rough River (Reservoir)	Grayson
Campbellsville Water Works	Mile 5.3 of Robinson Creek (Green River Reservoir)	Taylor
Edmonson County Water District	Mile 183.7 of Green River	Edmonson
Elizabethtown Municipal Water Works B	Mile 2.1 of Freeman Creek (Freeman Lake)	Hardin
Tompkinsville Municipal Water Works	Mile 6.0 of Mill Creek (Mill Creek Reservoir)	Monroe
Madisonville Municipal Water Works	Mile 54.1 of Green River	Hopkins
Liberty Water Works	Mile 0.9 of Hickman Creek (Lake Liberty)	Casey
City of Lafayette (Tennessee)	Mile 118.4 of Barren River	Monroe
Stanford Water Works	Mile 0.6 of UT to Green River (James C. Harris Reservoir)	Lincoln
Hardin County Water District #2	Nolin River at mile 75.3 (White Mills Spring)	Hardin
Green River Valley Water District	Mile 240.6 of Green River	Hart
Scottsville Municipal Water Works	Mile 88.6 of Barren River (Barren River Lake)	Allen
Butler County Water System	Mile 143.8 of Green River	Butler
Edmonson County Water District	Mile 23.5 of Nolin River (Nolin Reservoir)	Grayson

Columbia Utilities Commission	Mile 317.5 of Green River (Green River Reservoir)	Adair
Henderson Water Utilities/South	Mile 41.3 of Green River	Webster
Webster Cnty Water District	Mile 47.5 of Green River	Webster
Hodgenville Water Works	Mile 0.3 of UT at mile 8.1 of North Fork Nolin River (Salem Lake)	Larue
Grayson County Water District	Mile 97.7 of Rough River (Rough River Reservoir)	Grayson
Lower Cumberland River Basin		
Kentucky State Penitentiary	Mile 40.2 of Cumberland River (Lake Barkley)	Lyon
Hopkinsville Water Environmental Authority	Mile 14.2 of North Fork Little River	Christian
Hopkinsville Water Environmental Authority	Mile 11.9 of Little River (Lake Barkley)	Trigg
Eddyville Municipal Water Works	Mile 1.5 of Knob Creek (Lake Barkley)	Lyon
Princeton Water Department	Mile 41.9 of Cumberland River (Lake Barkley)	Lyon
Kuttawa Municipal Water Plant	Mile 37.9 of Cumberland River (Lake Barkley)	Lyon
Barkley Lake Water District	Mile 0.7 of Hopson Creek (Lake Barkley)	Trigg
Crittenden-Livingston Co Water District	Mile 14.0 of Cumberland River	Livingston
Hopkinsville Water Environmental Authority	From Hopkinsville Stone Quarry No. 1 (South Quarry) adjacent to North Fork Little River at mile 14.8	Christian
Cadiz Water Company	Mile 13.5 of Little River	Trigg
Hopkinsville Water Environmental Authority	Hopkinsville Stone Quarry No. 2 (North Quarry) adjacent to White Creek at mile 0.2	Christian
TVA-Land Between The Lakes, Wrangler	Mile 1.0 on UT of Lick Creek at mile 1.1	Trigg
Eddyville Municipal Water Works	Mile 40.2 of Cumberland River (Lake Barkley)	Lyon
Tradewater River Basin		
Providence Water Works	Mile 0.3 of Owens Creek (New Providence City Lake)	Webster
Madisonville Municipal Water Works	Mile 6.3 of Greasy Creek (Lake Pewee).	Hopkins
Earlington Water Works	Mile 0.2 of UT to Clear Creek at mile 26.5 (Loch Mary Reservoir)	Hopkins
Dawson Springs City Water & Sewer	Mile 0.1 of Piney Creek (Lake Beshear)	Caldwell

Providence Municipal Water Works	Mile 41.3 of Tradewater River	Webster
Ohio River Basin (Main Stem And Minor Tributaries)		
Maysville Utility Commission	Mile 408.5 of Ohio River	Mason
Ashland Municipal Water Works	Mile 319.68 of Ohio River	Boyd
Northern Ky Water Service District - Newport Plant	Mile 463.6 of Ohio River	Campbell
Paducah Water Works	Mile 935.6 of Ohio River	McCracken
Louisville Water Company /ZPS A	Mile 600.6 of Ohio River	Jefferson
Henderson Water & Sewer Department	Mile 803.6 of Ohio River	Henderson
Northern Ky Water Service District Plant B	Mile 462.7 of Ohio River	Campbell
Morganfield Municipal Water Works	Mile 840.0 of Ohio River	Union
Russell Water Plant	Mile 327.7 of Ohio River	Greenup
Marion Municipal Water Works	Mile 26.4 of Crooked Creek (City Lake)	Crittenden
US Army Ft Knox A	Mile 8.6 of Otter Creek	Meade
Louisville Water Company BEPWTP B	Mile 594.7 of Ohio River	Jefferson
Sturgis Municipal Water Works	Mile 871.4 of Ohio River	Union

(3)(a) Table C in this subsection lists waters that have:

1. A designated use of CAH or OSRW; or
2. Exceptions to specific criteria in 401 KAR 10:031.

(b) All other criteria in 401 KAR 10:031 applicable to the listed use designations shall apply to surface waters listed in Table C in this subsection.

(c)1. DWS use shall apply to all waters listed in Table C in this section.

2. DWS use criteria found in 401 KAR 10:031, Section 6, shall apply only at the surface water intakes listed in Table B of this section.

Table C: SURFACE WATER USE DESIGNATIONS				
Stream	Zone (Descriptive and water body or segment river miles)	County	Use Designation	Exceptions to Specific Criteria
BIG SANDY RIVER BASIN				
Hobbs Fork of Pigeonroost Fork of Wolf Creek	Mouth to Headwaters (0.0-3.9)	Martin	WAH, PCR, SCR, OSRW	
Lower Pigeon Branch of Elkhorn Creek	Left Fork to Headwaters (0.6-1.9)	Pike	WAH, PCR, SCR, OSRW	
Paint Creek of Levisa Fork	Levisa Fork to Paintsville Dam (0.0-8.3)	Johnson	CAH, PCR, SCR	
Russell Fork of Levisa Fork of Big Sandy River	Clinch Field RR Yard off HWY 80 to Virginia State Line (15.0-16.5)	Pike	WAH, PCR, SCR, OSRW	
Toms Branch of Elkhorn Creek	Mouth to Headwaters (0.0-1.6)	Pike	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Hobbs Fork	Hobbs Fork of Pigeonroost Fork to Headwaters (0.0-0.55)	Martin	WAH, PCR, SCR, OSRW	
LAKES AND RESERVOIRS				
Paintsville	Entire reservoir	Johnson	WAH, CAH, PCR, SCR	
LITTLE SANDY RIVER BASIN				
Arabs Fork of Big Sinking Creek	Clay Fork to Headwaters (0.0-5.1)	Elliott	WAH, PCR, SCR, OSRW	
Big Caney Creek	Grayson Lake to source (1.8-15.3)	Elliott/ Rowan	CAH, PCR, SCR, OSRW	
Big Sinking Creek of Little Sandy River	SR 986 to Clay Fork and Arab Fork (6.1-15.2)	Carter/ Elliott	WAH, PCR, SCR, OSRW	
Laurel Creek of Little Sandy River	Little Sandy River to Carter School Rd (0.0-7.6)	Elliott/ Rowan	CAH, PCR, SCR,	

Laurel Creek of Little Sandy River	Carter School Rd Bridge to Headwaters (7.6-14.7)	Elliott/ Rowan	CAH, PCR, SCR, OSRW	
Meadow Branch of Little Fork of Little Sandy River	Mouth to Headwaters (0.0-1.4)	Elliott	WAH, PCR, SCR, OSRW	
Middle Fork of Little Sandy River	Mouth to Sheepskin Branch (0.0-3.4)	Elliott	WAH, PCR, SCR, OSRW	
Nichols Fork of Little Fork of Little Sandy River	Green Branch to Headwaters (0.0-2.0)	Elliott	WAH, PCR, SCR, OSRW	
LAKES AND RESERVOIRS				
Greenbo	Entire Reservoir	Greenup	WAH, CAH, PCR, SCR	
LICKING RIVER BASIN				
Blackwater Creek of Licking River	Eaton Creek to Greasy Fork (3.8-11.7)	Morgan	WAH, PCR, SCR, OSRW	
Blanket Creek of Licking River	Mouth to Unidentified Tributary (0.0-1.9)	Pendleton	WAH, PCR, SCR, OSRW	
Botts Fork of Brushy Fork of Licking River	Mouth to Landuse Change (0.0-2.1)	Menifee	WAH, PCR, SCR, OSRW	
Bowman Creek	Mouth to Unidentified Tributary (0.0-6.0)	Kenton	WAH, PCR, SCR, OSRW	
Brushy Fork of Meyers Creek	Cave Run Lake Backwaters to Headwaters (0.7-5.6)	Menifee	WAH, PCR, SCR, OSRW	
Bucket Branch of North Fork of Licking River	Mouth to Headwaters (0.0-1.9)	Morgan	WAH, PCR, SCR, OSRW	
Cedar Creek of Licking River	Mouth to North Branch of Cedar Creek (0.0-1.7)	Robertson	WAH, PCR, SCR, OSRW	
Craney Creek	Source to North Fork of Licking River (0.0-11.2)	Rowan/ Morgan	CAH, PCR, SCR, OSRW	
Devils Fork of North Fork of Licking River	Mouth to Headwaters (0.0-8.5)	Elliott/ Morgan	WAH, PCR, SCR, OSRW	
Flour Creek of Licking River	Mouth to Unidentified Tributary (0.0-2.2)	Pendleton	WAH, PCR, SCR, OSRW	
Grovers Creek of Kincaid Creek	Kincaid Lake Backwaters to Unidentified Tributary (0.5-3.4)	Bracken/ Pendleton	WAH, PCR, SCR, OSRW	
Licking River	River Mile 175.6 (U.S. Highway 60 Bridge) to River Mile 180.8 (Cave Run Lake Dam (175.6-180.8)	Bath/ Rowan	CAH, PCR, SCR	
Licking River	River Mile 159.5 (Hwy 211) to River Mile 170.6 (Unnamed Road off Slatey Point Road)	Bath/ Rowan/ Fleming	WAH, PCR, SCR, OSRW	
Licking River	River Mile 19.3 (Hwy 536 Bridge) to River Mile 117.6 (1.3 river miles above Fishtrap Creek)	Kenton/ Campbell/ Pendleton/ Harrison/ Robertson/ Fleming	WAH, PCR, SCR, OSRW	
Minor Creek of Craney Creek	Mouth to river mile 2.8 (0.0-2.8)	Morgan/ Rowan	CAH, PCR, SCR	
North Fork of Licking River	Cave Run Lake Backwaters to Devils Fork (8.4-13.4)	Morgan	WAH, PCR, SCR, OSRW	
Sawyers Fork of Cruises Creek	Mouth to Headwaters (0.0-3.3)	Kenton	WAH, PCR, SCR, OSRW	
Slabcamp Creek of Craney Creek of Licking River	Mouth to Headwaters (0.0-3.7)	Rowan	CAH, PCR, SCR, OSRW	
Slate Creek of Licking River	Mouth to Mill Creek (0.0-13.55)	Bath	WAH, PCR, SCR, OSRW	
South Fork Grassy Creek of Grassy Creek of Licking River	Mouth to Greasy Creek (0.0-19.8)	Kenton/ Pendleton	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Shannon Creek of North Fork of Licking River	Mouth to Headwaters 0.0-2.2)	Mason	WAH, PCR, SCR, OSRW	
Welch Fork of Brushy Fork of Licking River	Mouth to First Unnamed Tributary (0.0-1.0)	Menifee	WAH, PCR, SCR, OSRW	
West Creek of Licking River	Mouth to Headwaters (0.0-9.8)	Harrison/ Robertson	WAH, PCR, SCR, OSRW	
KENTUCKY RIVER BASIN				
Backbone Creek of Sixmile	Mouth to Scrabble Creek (0.0-1.65)	Franklin/ Henry/	WAH, PCR, SCR,	

Creek of Kentucky River		Shelby	OSRW	
Bear Branch of North Fork of Kentucky River	Above Sediment Pond to Headwaters (0.3-1.2)	Perry	WAH, PCR, SCR, OSRW	
Big Double Creek of Red Bird River	Mouth to Confluence of Left and Right Forks of Big Double Creek (0.0-4.4)	Clay	WAH, PCR, SCR, OSRW	
Bill Branch of Laurel Fork of Greasy Creek	Mouth to Right Fork and Left Fork Creek (0.0-0.3)	Leslie	WAH, PCR, SCR, OSRW	
Billey Fork of Millers Creek	Land Use Change to Headwaters (2.6-8.8)	Lee/Elliott	WAH, PCR, SCR, OSRW	
Bill Oak Branch of Left Fork of Buffalo Creek	Mouth to Headwaters (0.0-0.3)	Owsley	WAH, PCR, SCR, OSRW	
Buffalo Creek of South Fork of Kentucky River	Mouth to Right Fork and Left Fork (0.0-1.6)	Owsley	WAH, PCR, SCR, OSRW	
Cavanaugh Creek	South Fork of Station Camp Creek to Foxtown Rd (0.0-8.3)	Jackson	WAH, PCR, SCR, OSRW	
Cherry Run of Boyd Run of North Elkhorn Creek	Mouth to Boyd Run (0.0-0.9)	Scott	WAH, PCR, SCR, OSRW	
Chester Creek of Middle Fork of Red River	Mouth to Headwaters (0.0-2.8)	Wolfe	WAH, PCR, SCR, OSRW	
Chimney Top Creek of Red River	Basin (0.0-4.6)	Wolfe	CAH, PCR, SCR	
Clear Creek of Kentucky River	Mouth to East Fork Clear Creek (0.0-9.0)	Woodford	WAH, PCR, SCR, OSRW	
Clemons Fork of Buckhorn Creek	Mouth to Headwaters (0.0-4.8)	Breathitt	WAH, PCR, SCR, OSRW	
Coles Fork of Buckhorn Creek	Mouth to Headwaters (0.0-6.2)	Breathitt	WAH, PCR, SCR, OSRW	
Craig Creek of Kentucky River	Mouth (Kentucky River Backwaters) to Unidentified Tributary (0.0- 2.7)	Woodford	WAH, PCR, SCR, OSRW	
Deep Ford Branch of Cutshin Creek	Above Pond to Headwaters (0.3-1.35)	Leslie	WAH, PCR, SCR, OSRW	
Dix River	Mouth (Kentucky River) to River Mile 3.1 (Herrington Lake Dam) (0.0-3.1)	Garrard/ Mercer	CAH, PCR, SCR	
Dog Fork of Swift Camp Creek	Basin	Wolfe	CAH, PCR, SCR	
Drennon Creek of Kentucky River	Fivemile Creek to Town Branch (8.7-12.2)	Henry	WAH, PCR, SCR, OSRW	
East Fork of Indian Creek of Indian Creek of Red River	Headwaters East Fork of Indian Creek to Indian Creek (0.0-9.0)	Menifee	CAH, PCR, SCR OSRW	
Elisha Creek of Red Bird River	Land Use Change (Residential) to the confluence of Right Fork and Middle Fork Elisha Creek (0.8-1.8)	Leslie	WAH, PCR, SCR, OSRW	
Emily Run of Drennon Creek	Mouth to Unidentified Tributary (0.0-4.0)	Henry	WAH, PCR, SCR, OSRW	
Evans Fork of Billey Fork of Millers Creek	Mouth to Headwaters (0.0-3.0)	Estill	WAH, PCR, SCR, OSRW	
Falling Rock Branch of Clemons Fork of Buckhorn Creek	Mouth to Headwaters (0.0-0.7)	Breathitt	WAH, PCR, SCR, OSRW	
Gilberts Creek of Kentucky River	Mouth to Unidentified Tributary (0.0-2.6)	Anderson	WAH, PCR, SCR, OSRW	
Gladie Creek of Red River	Basin	Menifee	CAH, PCR, SCR	
Gladie Creek of Red River	Land Use Change to Long Branch (0.5-7.25)	Menifee	CAH, PCR, SCR, OSRW	
Goose Creek of South Fork of Kentucky River	Mouth to Laurel Creek (0.0-9.1)	Clay/Leslie	WAH, PCR, SCR, OSRW	
Griers Creek of Kentucky River	Kentucky River Backwaters to Unidentified Tributary (0.1-3.5)	Woodford	WAH, PCR, SCR, OSRW	
Grindstone Creek of Kentucky River	Kentucky River Backwaters to Headwaters (0.1-1.9)	Franklin	WAH, PCR, SCR, OSRW	
Hardwick Creek of Red River	Mouth to Little Hardwick Creek (0.0-3.25)	Powell	WAH, PCR, SCR, OSRW	
Hell For Certain of Middle Fork of Red River	Mouth to Big Fork (0.0-2.1)	Leslie	WAH, PCR, SCR, OSRW	
Hines Creek of Kentucky River	Kentucky River Backwaters to confluence with Unidentified Tributary (0.1-1.9)	Madison	WAH, PCR, SCR, OSRW	
Honey Branch of Greasy Creek of Middle Fork of Kentucky River	Mouth to Headwaters (0.0-1.35)	Leslie	WAH, PCR, SCR, OSRW	

Hopper Cave Branch of Cavanaugh Creek	Mouth to Headwaters (0.0-1.8)	Jackson	WAH, PCR, SCR, OSRW	
Indian Creek of Eagle Creek	Mouth to Headwaters (0.0-5.4)	Carroll	WAH, PCR, SCR, OSRW	
Indian Creek of Red River	River Mile 1.25 (East Fork of Indian Creek) to River Mile 5.2 (0.3 river miles below Bear Branch)	Menifee	CAH, PCR, SCR	
Indian Fork of Sixmile Creek of Kentucky River	Mouth to Headwaters (0.0-3.3)	Shelby	WAH, PCR, SCR, OSRW	
John Carpenter Fork of Clemons Fork of Buckhorn Creek	Mouth to Headwaters (0.0-1.2)	Breathitt	WAH, PCR, SCR, OSRW	
Katies Creek of Red Bird River	Mouth to Headwaters (0.0-4.0)	Clay	WAH, PCR, SCR, OSRW	
Laurel Fork of Left Fork Buffalo Creek of Buffalo Creek	Cortland Fork to Big Branch (0.0-3.75)	Owsley	WAH, PCR, SCR, OSRW	
Left Fork of Big Double Creek of Kentucky River	Mouth to Headwaters (0.0-1.5)	Clay	WAH, PCR, SCR, OSRW	
Line Fork of North Fork of Kentucky River	Defeated Creek to Headwaters (12.2-28.6)	Letcher	WAH, PCR, SCR, OSRW	
Little Middle Fork of Elisha Creek of Red Bird River	Mouth to Headwaters (0.0-0.75)	Leslie	WAH, PCR, SCR, OSRW	
Little Millseat Branch of Clemons Fork of Buckhorn Creek	Mouth to Headwaters (0.0-1.2)	Breathitt	WAH, PCR, SCR, OSRW	
Little Sixmile Creek of Sixmile Creek of Kentucky River	Mouth to Headwaters (0.0-5.3)	Henry	WAH, PCR, SCR, OSRW	
Lower Howard Creek of Kentucky River	Mouth to West Fork (0.5- 6.6)	Clark	WAH, PCR, SCR, OSRW	
Lulbegrud Creek of Red River	Mouth to Falls Branch (0.0-7.3)	Clark/ Powell	WAH, PCR, SCR, OSRW	
Middle Fork of Kentucky River	Mouth to Upper Twin Creek (0.0-12.7)	Lee/ Owsley	WAH, PCR, SCR, OSRW	
Middle Fork of Kentucky River	Hurts Creek to Greasy Creek (75.2-85.5)	Leslie	WAH, PCR, SCR, OSRW	
Middle Fork of Red River	River Mile 10.7 (0.7 river miles below Sinking Fork) to Headwaters (15.3)	Powell	CAH, PCR, SCR	
Middle Fork of Red River	South Fork of Red River to Natural Bridge State Park Lake (1.8-7.2)	Powell	CAH, PCR, SCR, OSRW	
Mikes Branch of Laurel Fork of Left Fork of Buffalo Creek	Mouth to Headwaters (0.0-0.7)	Owsley	WAH, PCR, SCR, OSRW	
Mill Creek of Kentucky River	Near Mouth to Headwaters (0.0-1.85)	Owen	WAH, PCR, SCR, OSRW	
Millseat Branch of Clemons Fork of Buckhorn Creek	Mouth to Headwaters (0.0-1.85)	Breathitt	WAH, PCR, SCR, OSRW	
Muddy Creek of Kentucky River	Elliston, Kentucky to Viney Fork (13.8-20.65)	Madison	WAH, PCR, SCR, OSRW	
Musselman Creek of Eagle Creek	Mouth to Headwaters (0.0-9.0)	Grant	WAH, PCR, SCR, OSRW	
Parched Corn Creek	Source to Red River (0.0-2.25)	Wolfe	CAH, PCR, SCR	
Red River	River Mile 70.4 (SR 746) to River Mile 50.3 (0.1 Miles below Auxier Branch)	Menifee/ Wolfe	WAH, PCR, SCR, OSRW	
Red Bird River of South Fork of Kentucky River	Mouth to Big Creek (0.0-15.3)	Clay	WAH, PCR, SCR, OSRW	
Right Fork of Buffalo Creek of Kentucky River	Mouth to Headwaters (0.0-2.1)	Owsley	WAH, PCR, SCR, OSRW	
Right Fork of Elisha Creek of Redbird River	Mouth to Headwaters (0.0-3.3)	Leslie	WAH, PCR, SCR, OSRW	
Roaring Fork of Lewis Fork of Buckhorn Creek	Mouth to Headwaters (0.0-0.9)	Breathitt	WAH, PCR, SCR, OSRW	
Rock Lick Creek	Mouth to Headwaters (0.0-9.6)	Jackson	WAH, PCR, SCR, OSRW	
Sand Ripple Creek of Kentucky River	Kentucky River Backwaters to Headwaters (0.1-3.9)	Henry	WAH, PCR, SCR, OSRW	
Severn Creek of Kentucky River	Kentucky River Backwaters to North Fork of Severn Creek (1.35-3.0)	Owen	WAH, PCR, SCR, OSRW	
Shaker Creek of Kentucky	Near Mouth to Shawnee Run (0.1-	Mercer	WAH, PCR, SCR,	

River	1.4)		OSRW	
Shelly Rock Fork of Millseat Branch of Clemons Fork	Mouth to Headwaters (0.0-0.6)	Breathitt	WAH, PCR, SCR, OSRW	
Sixmile Creek of Kentucky River	Little Sixmile Creek to Dam (7.1-15.3)	Henry	WAH, PCR, SCR, OSRW	
South Fork of Kentucky River	Mouth to Sexton Creek (0.0-27.8)	Owsley	WAH, PCR, SCR, OSRW	
South Fork of Red River	Mouth to Sandlick Fork (0.0-4.2)	Powell	WAH, PCR, SCR, OSRW	
South Fork of Station Camp Creek of Kentucky River	Mouth to Rock Lick Creek (0.0-9.7)	Jackson	WAH, PCR, SCR, OSRW	
Spruce Branch of Redbird River	Mouth to Headwaters (0.0-1.0)	Clay	WAH, PCR, SCR, OSRW	
Station Camp Creek of Kentucky River	Landuse Change (Crooked Cr.) to South Fork of Station Camp Creek (3.3-22.7)	Estill	WAH, PCR, SCR, OSRW	
Steeles Run of Elkhorn Creek	Mouth to Unidentified Tributary (0.0-4.2)	Fayette	WAH, PCR, SCR, OSRW	
Steer Fork of War Fork of Station Camp Creek	Mouth to Headwaters (0.0-2.7)	Jackson	CAH, PCR, SCR, OSRW	
Sturgeon Creek of Kentucky River	Duck Fork to Little Sturgeon Creek (1.3-13.7)	Lee/ Owsley	WAH, PCR, SCR, OSRW	
Sugar Creek of Redbird River	Landuse Change to Headwaters (0.6-5.4)	Leslie	WAH, PCR, SCR, OSRW	
Sulphur Lick Creek of Elkhorn Creek	Mouth to Headwaters (0.0-5.2)	Franklin	WAH, PCR, SCR, OSRW	
Swift Camp Creek	Red River to Source (0.0-13.9)	Wolfe	CAH, PCR, SCR	
Unidentified Tributary of Cawood Branch of Beech Fork	Mouth to Headwaters (0.0-2.1)	Leslie	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Cedar Creek of Kentucky River	Mouth to Headwaters (0.0-1.4)	Owen	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Glenns Creek of Kentucky River	Mouth to Headwaters (0.0-1.9)	Woodford	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Jacks Creek of Kentucky River	Mouth to Headwaters (0.0-1.15)	Madison	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Kentucky River	Mouth at Kentucky River Backwaters to Land Use Change (0.1-1.4)	Franklin	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Line Fork of North Fork of Kentucky River (LCW)	Mouth to Headwaters (0.0-0.6)	Letcher	WAH, PCR, SCR, OSRW	
War Fork of Station Camp Creek	Mouth to Headwaters (0.0-13.8)	Jackson	CAH, PCR, SCR, OSRW	
War Fork of Station Camp Creek	Basin above River Mile 1.9 (0.3 river miles below—Tarpin Lick Branch (2.5))	Jackson	CAH, PCR, SCR	
Watches Fork of Laurel Fork of Left Fork of Buffalo Creek	Mouth to Headwaters (0.0-1.0)	Owsley	WAH, PCR, SCR, OSRW	
Wolfpen Creek of Red River	Mouth to Headwaters (0.0-3.6)	Menifee	WAH, PCR, SCR, OSRW	
LAKES AND RESERVOIRS				
Bert Combs	Entire Reservoir	Clay	WAH, CAH, PCR, SCR	
Fishpond	Entire Reservoir	Letcher	WAH, CAH, PCR, SCR	
Mill Creek	Entire Reservoir	Wolfe	WAH, CAH, PCR, SCR	
SALT RIVER BASIN				
Brashears Creek of Salt River	Guist Creek to Bullsken and Clear Creek (13.0-25.9)	Shelby/ Spencer	WAH, PCR, SCR, OSRW	
Cedar Creek of Salt River	Mouth to Greens Branch (0.0-5.2)	Bullitt	WAH, PCR, SCR, OSRW	
Chaplin River of Salt River	Thompson Creek to Cornishville, KY (40.9-54.2)	Washington	WAH, PCR, SCR, OSRW	
Doctors Fork of Chaplin River	Mouth to Begley Branch (0.0-3.8)	Boyle	WAH, PCR, SCR, OSRW	

Guist Creek of Brashears Creek	Mouth to Jephtha Creek (0.0-15.7)	Spencer	WAH, PCR, SCR, OSRW	
Harts Run of Wilson Creek of Rolling Fork of Salt River	Mouth to Headwaters (0.0-1.8)	Bullitt	WAH, PCR, SCR, OSRW	
Indian Creek of Thompson Creek of Chaplin River of Salt River	Mouth to Unidentified Tributary (0.0-2.9)	Mercer	WAH, PCR, SCR, OSRW	
Lick Creek of Long Lick Creek of Beech Fork of Salt River	Mouth to 0.1 miles below Dam (0.0-4.1)	Washington	WAH, PCR, SCR, OSRW	
Otter Creek of Rolling Fork of Salt River	Landuse Change to confluence of East Fork and Middle Fork Otter Creek (1.7-2.9)	Larue	WAH, PCR, SCR, OSRW	
Overalls Creek of Wilson Creek of Rolling Fork of Salt River	Mouth to Headwaters of Middle Fork of Overalls Creek (0.0-3.2)	Bullitt	WAH, PCR, SCR, OSRW	
Paddy's Run	Mouth (Ohio River) to headwaters	Jefferson	PCR, SCR	401 KAR 10:031, Section 2(1)(d) and 2(2) do not apply.
Rolling Fork of Salt River	River Mile 53.6 (0.8 mi upstream of Stiles Rd Bridge) to River Mile 62.5 (0.5 mi upstream of Otter Cr)	Larue/ Nelson	WAH, PCR, SCR, OSRW	
Salt Lick Creek of Rolling Fork of Salt River	Mouth to Headwaters (0.0-8.6)	Larue, Marion	WAH, PCR, SCR, OSRW	
Sulphur Creek of Chaplin River	Mouth to confluence of Cheese Lick and Brush Creek (0.0-10.0)	Anderson/ Mercer/ Washington	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Glens Creek of Chaplin River	Mouth to Headwaters (0.0-2.3)	Washington	WAH, PCR, SCR, OSRW	
West Fork of Otter Creek of Rolling Fork of Salt River	Mouth to Headwaters (0.0-5.1)	Larue	WAH, PCR, SCR, OSRW	
Wilson Creek of Rolling Fork of Salt River	Mouth to Headwaters (0.0-18.4)	Bullitt/ Nelson	WAH, PCR, SCR, OSRW	
GREEN RIVER BASIN				
Barren River	Green River to River Mile Lock and Dam #1 to Green River (0.0-15.1)	Butler/ Warren	WAH, PCR, SCR, OSRW	
Beaverdam Creek	Source to Green River (14.5-0.0)	Edmonson	CAH, PCR, SCR, OSRW	
Cane Run of Nolin River	Nolin River Lake Backwaters to Headwaters (0.8-6.5)	Hart	WAH, PCR, SCR, OSRW	
Caney Fork of Peter Creek	Mouth to Headwaters (0.0-6.7)	Barren	WAH, PCR, SCR, OSRW	
Clifty Creek of Rough River	Barton Run to Western Kentucky Parkway (7.5-17.3)	Grayson	WAH, PCR, SCR, OSRW	
Clifty Creek of Wolf Lick Creek	Little Clifty Creek to Sulphur Lick (0.0-13.4)	Todd	WAH, PCR, SCR, OSRW	
Double Sink Spring	Basin Outside Mammoth Cave National Park Boundary	Edmonson/ Barren	CAH, PCR, SCR, OSRW	
East Fork of Little Barren River	Red Lick Creek to Flat Creek (18.9-20.6)	Metcalfe	WAH, PCR, SCR, OSRW	
Echo River	Basin Outside Mammoth Cave National Park Boundary (underground system)	Edmonson	CAH, PCR, SCR, OSRW	
Ellis Fork of Damron Creek	Mouth to Headwaters (0.0-2.2)	Adair/ Russell	WAH, PCR, SCR, OSRW	
Falling Timber Creek of Skaggs Creek	Landuse Change to Headwaters (10.8-15.2)	Barren/ Metcalfe	WAH, PCR, SCR, OSRW	
Fiddlers Creek of North Fork of Rough River	Mouth to Headwaters (0.0-5.9)	Breckinridge	WAH, PCR, SCR, OSRW	
Forbes Creek of Buck Creek of East Fork of Pond River	Mouth to Unidentified Tributary (0.0-4.1)	Christian	WAH, PCR, SCR, OSRW	
Ganter Spring	Basin Outside Mammoth Cave National Park Boundary	Edmonson	CAH, PCR, SCR, OSRW	
Gaspar River of Barren River	Clear Fork to Wiggington Creek (17.2-35.6)	Logan/ Warren	WAH, PCR, SCR, OSRW	
Goose Creek of Green River	Mouth to Little Goose Creek (0.0-8.5)	Casey/ Russell	WAH, PCR, SCR, OSRW	
Green River	River Mile 210.6 (eastern Mammoth Cave National Park Boundary to River Mile 309.1 (Green River Lake Dam)	Hart/Taylor/ Green	WAH, PCR, SCR, OSRW	

Green River	River Mile 185.0 (western Mammoth Cave National Park Boundary) to River Mile 210.6 (eastern Mammoth Cave National Park Boundary)	Edmonson/ Hart	WAH, PCR, SCR, OSRW
Green River	Downstream Mammoth Cave National Park Boundary to Lynn Camp Creek (185.0-250.3)	Edmonson/ Hart	WAH, PCR, SCR, OSRW
Green River	River Mile 148.5 (1.0 river mile below Lock and Dam #4) to River Mile 170.0 (Lock and Dam #5)	Butler/ Warren	WAH, PCR, SCR, OSRW
Halls Creek of Rough River	Unidentified Tributary to Headwaters (4.8-9.6)	Ohio	WAH, PCR, SCR, OSRW
Lick Creek of West Fork of Drakes Creek	Mouth to Headwaters (0.0-10.2)	Simpson	CAH, PCR, SCR, OSRW
Linders Creek of Rough River	Mouth to Sutzer Creek (0.0-7.9)	Hardin	WAH, PCR, SCR, OSRW
Little Beaverdam Creek of Green River	Mouth to SR 743 (0.0-11.4)	Edmonson/ Warren	WAH, PCR, SCR, OSRW
Little Short Creek of Rough River	Mouth to Headwaters (0.0-3.1)	Grayson	WAH, PCR, SCR, OSRW
Lynn Camp Creek	Green River to Source (0.0-8.3)	Hart	CAH, PCR, SCR
Lynn Camp Creek of Green River	Mouth to Lindy Creek (0.0-8.5)	Hart	CAH, PCR, SCR, OSRW
McFarland Creek of West Fork of Pond River	Grays Branch to Unidentified Tributary (1.5-5.0)	Christian	WAH, PCR, SCR, OSRW
McCoy Spring	Basin Outside Mammoth Cave National Park Boundary	Hart	CAH, PCR, SCR, OSRW
Meeting Creek of Rough River	Little Meeting Creek to Petty Branch (5.2-14.0)	Grayson/ Hardin	WAH, PCR, SCR, OSRW
Mile 205.7 Spring	Basin Outside Mammoth Cave National Park Boundary	Hart	CAH, PCR, SCR, OSRW
Muddy Creek of Caney Creek of Rough River	Landuse Change to Headwaters (13.5-15.5)	Ohio	WAH, PCR, SCR, OSRW
Nolin River	River Mile 7.7 (Nolin Lake Dam) to Green River (0.0-7.7)	Edmonson	CAH, WAH, PCR, SCR
North Fork of Rough River	Buffalo Creek to Reservoir Dam (22.1 -26.9)	Breckinridge	WAH, PCR, SCR, OSRW
Peter Creek of Barren River	Caney Fork to Dry Fork (11.6-18.5)	Barren	WAH, PCR, SCR, OSRW
Pike Spring	Basin Outside Mammoth Cave National Park Boundary	Edmonson	CAH, PCR, SCR, OSRW
Pond Run of Rough River	Landuse Change to Headwaters (1.4-6.8)	Breckinridge/Ohio	WAH, PCR, SCR, OSRW
Rough River	Linders Creek to Vertrees Creek (138.0-149.4)	Hardin	WAH, PCR, SCR, OSRW
Rough River	River Mile 89.6 to Rough River Lake Dam to 90.4	Ohio/ Grayson	CAH, WAH, PCR, SCR
Rough River	River Mile 74.5 to River Mile 74.2 (Hwy 54 Bridge)	McLean/ Ohio	CAH, PCR, SCR
Roundstone Creek of Nolin River	Hwy 1140 (River Mile 3.8) to Headwaters (River Mile 10.25)	Hart	CAH, PCR, SCR
Running Spring	Basin Outside Mammoth Cave National Park Boundary	Edmonson	CAH, PCR, SCR, OSRW
Russell Creek of Green River	Mouth to Columbia WWTP (0.0-40.0)	Green/ Adair	WAH, PCR, SCR, OSRW
Russell Creek of Green River	Reynolds Creek to confluence with Hudson Creek and Mount Olive Creek (56.9 -66.3)	Adair, Russell	WAH, PCR, SCR, OSRW
Sixes Creek of Indian Camp Creek	Wild Branch to Headwaters (2.0-7.5)	Ohio	WAH, PCR, SCR, OSRW
Suds Spring	Basin Outside Mammoth Cave National Park Boundary	Hart/ Barren	CAH, PCR, SCR, OSRW
Sulphur Branch of Alexander Creek	Mouth to Headwaters (0.0-3.0)	Edmonson	WAH, PCR, SCR, OSRW
Thompson Branch	Webb Branch to Tennessee State Line (0.3-1.5)	Simpson	WAH, PCR, SCR, OSRW
Trammel Fork of West Fork of Drakes Creek	River Mile 30.6 (Kentucky/Tennessee State Line) to Hwy 31E (River Mile 23.8)	Allen	CAH, PCR, SCR,
Trammel Fork of West Fork of Drakes Creek	Mouth to Tennessee State Line (0.0-30.6)	Allen/ Warren	CAH, PCR, SCR, OSRW
Turnhole Spring	Basin Outside Mammoth Cave	Edmonson/ arren	CAH, PCR, SCR,

	National Park Boundary		OSRW	
Underground River System	Mammoth Cave National Park	Edmonson/Hart/Barren	CAH, PCR, SCR, OSRW	
Unidentified Tributary of Green River	Landuse Change to Headwaters (1.7-3.2)	Adair	WAH, PCR, SCR, OSRW	
Unidentified Tributary of White Oak Creek	Hovious Rd Crossing to SR 76 (0.0-2.1)	Adair	WAH, PCR, SCR, OSRW	
West Fork of Pond River	Unidentified Tributary to East Branch of Pond River (12.45 -22.5)	Christian	WAH, PCR, SCR, OSRW	
TRADEWATER RIVER BASIN				
East Fork of Flynn Fork of Tradewater River	Landuse Change (US Hwy 62) to Headwaters (2.15-4.6)	Caldwell	WAH, PCR, SCR, OSRW	
Piney Creek of Tradewater River	Lake Beshear Backwaters to Headwaters (4.5-10.2)	Caldwell, Christian	WAH, PCR, SCR, OSRW	
Sandlick Creek of Tradewater River	Camp Creek to Headwaters (4.5-8.6)	Christian	WAH, PCR, SCR, OSRW	
Tradewater River	Dripping Springs Branch to Buntin Lake Dam (126.2-133.9)	Christian	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Piney Creek of Tradewater River	Mouth to Headwaters (0.0-2.9)	Caldwell	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Sandlick Creek of Tradewater River	Mouth to Headwaters (0.0-1.4)	Christian	WAH, PCR, SCR, OSRW	
LOWER CUMBERLAND RIVER BASIN				
Casey Creek	Mouth to headwaters (0.0-10.5)	Trigg	CAH, PCR, SCR	
Crooked Creek of Cumberland River	Energy Lake Backwaters to Headwaters (3.0-9.1)	Trigg	WAH, PCR, SCR, OSRW	
Donaldson Creek of Cumberland River	Barkley Lake Backwaters to Unnamed Tributary (4.0-7.2)	Trigg	WAH, PCR, SCR, OSRW	
Elk Fork of Red River of Cumberland River	Tennessee State Line to Dry Branch (7.5-23.1)	Todd	WAH, PCR, SCR, OSRW	
Skinframe Creek	Livingston Creek to Headwaters (0.0-7.8)	Lyon	CAH, PCR, SCR	
Sugar Creek of Cumberland River	Lick Creek to Unidentified Tributary (2.2-6.9)	Livingston	WAH, PCR, SCR, OSRW	
Sulphur Spring Creek	Red River to Headwaters (0.0-9.1)	Simpson	CAH, PCR, SCR	
West Fork of Red River	State Line to River Mile 29.0 (14.5-32.2)	Christian	CAH, PCR, SCR, OSRW	
Whipporwill Creek	Red River to Headwaters (0.0-45.4)	Logan/Todd	WAH, PCR, SCR, OSRW	
UPPER CUMBERLAND RIVER BASIN				
Acorn Fork of Stinking Creek	Basin above River Mile 1.0	Knox	WAH, PCR, SCR, OSRW	
Adams Branch of Pigeon Roost Creek	Basin	Whitley	WAH, PCR, SCR, OSRW	
Archers Creek of Cumberland River	Basin (above RM 0.05 mi backwater at mouth)	Whitley	WAH, PCR, SCR, OSRW	
Bad Branch of Poor Fork of Cumberland River	Basin	Letcher	CAH, PCR, SCR, OSRW	
Bark Camp Creek of Cumberland River	Basin (above RM 0.1 backwater at mouth)	Whitley	CAH, PCR, SCR, OSRW	
Barren Fork of Indian Creek	Basin	McCreary	PCR, SCR, OSRW	
Beaver Creek of Cumberland River	Basin	McCreary	CAH, PCR, SCR, OSRW	
Bee Lick Creek of Brushy Creek of Buck Creek	Mouth to Warren Branch (0.0-5.7)	Pulaski	WAH, PCR, SCR, OSRW	
Bens Fork of Little Clear Creek	Basin	Bell	WAH, PCR, SCR, OSRW	
Big Branch of Marsh Creek	Basin above River Mile 0.8	McCreary	WAH, PCR, SCR, OSRW	
Big Lick Branch of Cumberland River	Basin (above 1.1, Cumberland River backwaters)	Pulaski	WAH, PCR, SCR, OSRW	
Blacksnake Branch of Brownies Creek	Basin	Bell	WAH, PCR, SCR, OSRW	
Breedens Creek of Clover Fork of Cumberland River	Basin	Harlan	WAH, PCR, SCR, OSRW	
Brices Creek of Road Fork of Stinking Creek	Basin	Knox	WAH, PCR, SCR, OSRW	
Brownies Creek of	Basin above Blacksnake Branch	Harlan	WAH, PCR, SCR,	

Cumberland River	(RM 10.3)		OSRW	
Brush Creek of Roundstone Creek	Wolf Creek to Reemergence of Sinking Creek (1.1-7.6)	Rockcastle	WAH, PCR, SCR, OSRW	
Brushy Creek of Buck Creek	Mouth to Headwaters (0.0-16.5)	Pulaski	WAH, PCR, SCR, OSRW	
Buck Creek of Cumberland River	River Mile 11.7 (Backwaters of Lake Cumberland) to RM 55.0 (0.8 RM upstream of confluence of Hurricane Creek)	Pulaski	WAH, PCR, SCR, OSRW	
Buck Creek of Clear Fork of Cumberland River	Basin	Whitley	WAH, PCR, SCR, OSRW	
Bucks Branch of Jellico Creek	Basin	Whitley	WAH, PCR, SCR, OSRW	
Buffalo Creek of Laurel Fork of Clear Fork of Cumberland River	Basin above Kentucky/ Tennessee State Line	Whitley	WAH, PCR, SCR, OSRW	
Bunches Creek of Cumberland River	Basin	Whitley	CAH, PCR, SCR, OSRW	
Campbell Branch of Jellico Creek	Basin	Whitley	WAH, PCR, SCR, OSRW	
Cane Creek of Rockcastle River	Mouth to Dam (0.0-11.85)	Laurel	WAH, PCR, SCR, OSRW	
Caney Creek of Left Fork of Straight Creek	Basin	Bell	WAH, PCR, SCR, OSRW	
Cannon Creek of Yellow Creek	Basin above Cannon Creek Lake (RM 5.1)	Bell	WAH, PCR, SCR, OSRW	
Clifty Creek of Brushy Creek of Buck Creek	Mouth to Rocky Branch (0.0-2.7)	Pulaski	WAH, PCR, SCR, OSRW	
Clover Bottom Creek	Horse Lick Creek to River Mile 1.4	Jackson	CAH, PCR, SCR	
Cogur Fork of Indian Creek	Basin	McCreary	CAH, PCR, SCR, OSRW	
Coles Branch of Road Fork of Stinking Creek	Basin	Knox	WAH, PCR, SCR, OSRW	
Colliers Creek of Poor Fork of Cumberland River	Basin	Bell	WAH, PCR, SCR, OSRW	
Criscillis Branch of Jellico Creek	Basin	Whitley	WAH, PCR, SCR, OSRW	
Cumberland River	River Mile 549.65 (Backwaters Lake Cumberland) to River Mile 566.1 (0.2 mile below Summer Shoals)	McCreary/ Whitley	WAH, PCR, SCR, OSRW	
Cumberland River	Kentucky/Tennessee state line (River Mile 379.8) to River Mile 456.7 (Lake Cumberland Dam)	Clinton, Cumberland, Russell, Monroe	CAH, PCR, SCR	
Davis Branch of Little Yellow Creek	Basin	Bell	WAH, PCR, SCR, OSRW	
Dog Slaughter Creek of Cumberland River	Basin	Whitley	CAH, PCR, SCR, OSRW	
Dolen Branch of Rock Creek	Basin	McCreary	WAH, PCR, SCR, OSRW	
Eagle Creek of Cumberland River	Basin	McCreary	WAH, PCR, SCR, OSRW	
FishTrap Branch	Basin above River Mile 0.5 (Lake Cumberland backwaters)	McCreary	WAH, PCR, SCR, OSRW	
Four Mile Creek of Cumberland River	Basin above River Mile 2.5	Bell	WAH, PCR, SCR, OSRW	
Four Mile Run of Yellow Creek Bypass	Basin above River Mile 1.0	Bell	WAH, PCR, SCR, OSRW	
Fugitt Creek of Clover Fork of Cumberland River	Basin	Harlan	CAH, PCR, SCR, OSRW	
Hale Fork of Road Fork of Stinking Creek	Basin	Knox	WAH, PCR, SCR, OSRW	
Hawk Creek of Rockcastle River	Basin	Laurel	CAH, PCR, SCR	
Hinkle Branch of Road Fork of Stinking Creek	Basin	Knox	WAH, PCR, SCR, OSRW	
Honeycutt Branch of Turkey Creek of Stinking Creek	Basin	Knox	WAH, PCR, SCR, OSRW	
Horse Lick Creek	Mouth (0.0) at Middle Fork of Rockcastle River to River Mile 12.3 (Clover Bottom Creek)	Jackson/ Rockcastle	WAH, PCR, SCR, OSRW	

Howards Creek of Illwill Creek of Wolf River	Dale Hollow Reservoir Backwaters to Headwaters	Clinton	WAH, PCR, SCR, OSRW
Hunting Shirt Branch of Richland Creek	Basin	Knox	WAH, PCR, SCR, OSRW
Indian Creek of Cumberland River	Kilburn Fork to Barren Fork (2.4-6.8)	McCreary	WAH, PCR, SCR, OSRW
Indian Creek of Cumberland River	Basin above and including Barren Fork	McCreary	CAH, PCR, SCR, OSRW
Jackie Branch of Bark Camp Creek	Mouth to Headwaters (0.0-1.65)	Whitley	CAH, PCR, SCR, OSRW
Jellico Creek of Cumberland River	River Mile 22.5 (confluence with Capuchin Creek) to River Mile 25.3 (Kentucky/Tennessee State Line)	McCreary	WAH, PCR, SCR, OSRW
Jennys Branch of Laurel Fork of Marsh Creek	Basin	McCreary	WAH, PCR, SCR, OSRW
Kelly Branch of Clover Fork of Cumberland River	Basin	Harlan	WAH, PCR, SCR, OSRW
Kennedy Creek of Little South Fork of Cumberland River	Little South Fork of Cumberland River to River Mile 1.0	Wayne	WAH, PCR, SCR, OSRW
Kilburn Fork of Indian Creek	Basin	McCreary	WAH, PCR, SCR, OSRW
Laurel Creek of Marsh Creek	River Mile 3.1 (Jennys Branch) to River Mile 9.0 (Dam)	McCreary	CAH, PCR, SCR, OSRW
Laurel Fork of Clear Fork of Cumberland River	Basin above River Mile 16.0 (John Partin Road off Hwy 190)	Bell	WAH, PCR, SCR, OSRW
Laurel Fork of Clear Fork of Cumberland River	River Mile 4.25 (Kentucky/Tennessee state line) to River Mile 16.0 (John Partin Road off Hwy 90)	Whitley	WAH, PCR, SCR, OSRW
Laurel Fork of Kilburn Fork	Basin	McCreary	WAH, PCR, SCR, OSRW
Laurel Fork of Middle Fork Rockcastle River	Middle Fork of Rockcastle River to Headwaters (0.0-12.3)	Jackson	WAH, PCR, SCR, OSRW
Laurel River	River Mile 0.9 to Laurel River Lake Dam (0.9-2.4)	Laurel, Whitley	CAH, PCR, SCR
Lick Fork of Yellow Creek By-Pass of Yellow Creek	Basin	Bell	WAH, PCR, SCR, OSRW
Little Popular Creek of Cumberland River	Basin above Hubbs Creek (4.4)	Knox	WAH, PCR, SCR, OSRW
Little South Fork of Cumberland River	River Mile 4.4 (backwaters of Lake Cumberland) to River Mile 35.5 (Confluence with Langham Branch)	Wayne, McCreary	WAH, PCR, SCR, OSRW
Long Branch of Left Fork of Straight Creek	Basin	Bell	WAH, PCR, SCR, OSRW
Looney Creek of Poor Fork of Cumberland River	Basin above River Mile 5.9 (Lynch City Limits)	Harlan	CAH, PCR, SCR
Marsh Creek	Basin above River Mile 24.6 (Confluence with Murphy Creek) to River Mile 26.5 (within Kentucky)	McCreary	WAH, PCR, SCR, OSRW
Marsh Creek	River Mile 0.05 (confluence with Cumberland River) to River Mile 24.6 (confluence with Murphy Creek)	McCreary	WAH, PCR, SCR, OSRW
Martins Fork	Basin above River Mile 32.7 (Cumberland Gap National Historical Park Boundary)	Bell	CAH, PCR, SCR
Martins Fork	River Mile 27.2 to River Mile 32.7 (Cumberland Gap National Historical Park Boundary)	Bell, Harlan	CAH, PCR, SCR, OSRW
McFarland Creek of Cumberland River	Little McFarland Creek to Spring Branch (0.8-6.2)	Monroe	WAH, PCR, SCR, OSRW
Meadow Fork of Franks Creek	Basin	Letcher	WAH, PCR, SCR, OSRW
Meshack Creek of Cumberland River	Mouth to Pitcock Branch (0.0-2.8)	Monroe	WAH, PCR, SCR, OSRW
Middle Fork of Rockcastle River	Confluence of Middle and South Forks of Rockcastle River (River Mile 0.0) to River Mile 7.9 (confluence of Indian Creek and Laurel Fork)	Jackson	WAH, PCR, SCR, OSRW
Mill Branch of Stinking Creek	Basin above reservoir backwaters (0.8)	Knox	WAH, PCR, SCR, OSRW

Mill Creek of Straight Creek	Basin	Bell	WAH, PCR, SCR, OSRW	
Mill Creek of Cumberland River	Basin	McCreary	WAH, PCR, SCR, OSRW	
Moore Creek of Stinking Creek	Basin	Knox	WAH, PCR, SCR, OSRW	
Mud Creek of Clear Fork of Cumberland River	Basin above River Mile 6.5 (0.3 river miles above Siler Cemetery Road Bridge)	Whitley	WAH, PCR, SCR, OSRW	
Mud Camp Creek of Cumberland River	Mouth to Collins Branch (0.0-1.2)	Cumberland	WAH, PCR, SCR, OSRW	
Mud Camp Creek of Cumberland River	Unidentified Tributary to Headwaters (3.8-8.8)	Cumberland/Monroe	WAH, PCR, SCR, OSRW	
Mud Lick of Stinking Creek	Basin	Knox	WAH, PCR, SCR, OSRW	
Ned Branch of Rockcastle River	Basin above backwaters (RM 0.45)	Laurel	WAH, PCR, SCR, OSRW	
Otter Creek of Cumberland River	Lake Cumberland Backwaters to Carpenter Fork (14.0-22.1)	Wayne	WAH, PCR, SCR, OSRW	
Patterson Creek of Cumberland River	Basin above River Mile 7.3 (confluence with Rose Creek)	Whitley	WAH, PCR, SCR, OSRW	
Poor Fork of Cumberland River	Franks Creek to Headwaters (41.4-51.7)	Letcher	WAH, PCR, SCR, OSRW	
Poor Fork of Cumberland River	Basin above River Mile 48.1 (at Joseph Road off of Hwy 932)	Letcher	CAH, PCR, SCR, OSRW	
Presley House Branch of Poor Fork of Cumberland River	Mouth to Headwaters (0.0-1.5)	Letcher	WAH, PCR, SCR, OSRW	
Puncheoncamp Branch of Rock Creek of South Fork of Cumberland River	Mouth to Headwaters (0.0-1.85)	McCreary	WAH, PCR, SCR, OSRW	
Richland Creek of Cumberland River	Basin above River Mile 15.8 (0.5 stream miles above Hubbard Branch) to River Mile 21.4	Knox	WAH, PCR, SCR, OSRW	
Roaring Fork of Stinking Creek	Basin	Knox	WAH, PCR, SCR, OSRW	
Rock Creek of South Fork of Cumberland River	Kentucky/Tennessee State Line (River Mile 21.5) to White Oak Creek	McCreary	CAH, PCR, SCR, OSRW	
Rock Creek of Jellico Creek	Basin	McCreary	WAH, PCR, SCR, OSRW	
Rockcastle River	River Mile 8.95 (backwaters of Lake Cumberland) to River Mile 54.7 (confluence of Middle Fork and South Fork Rockcastle River)	Laurel/ Pulaski	WAH, PCR, SCR, OSRW	
Ross Branch of Jellico Creek	Basin	Whitley	WAH, PCR, SCR, OSRW	
Roundstone Creek of Rockcastle River	River Mile 13.5 (confluence of Renfro Creek) to River Mile 26.4 (Interstate -75)	Rockcastle	WAH, PCR, SCR, OSRW	
Ryans Creek of Jellico Creek	Basin	Whitley	WAH, PCR, SCR, OSRW	
Sanders Creek of Cumberland River	Basin	Whitley	WAH, PCR, SCR, OSRW	
Shillalah Creek of Clear Fork of Yellow Creek	Cumberland Gap National Historical Park Boundary to Headwaters (1.5-5.5)	Bell	CAH, PCR, SCR, OSRW	
Shillalah Creek of Clear Fork of Yellow Creek	Mouth to Cumberland Gap National Historical Park Boundary (0.0-1.5)	Bell	WAH, PCR, SCR, OSRW	
Shut-in Branch of Jellico Creek	Basin	McCreary	WAH, PCR, SCR, OSRW	
Sinking Creek	Headwaters to Rockcastle River (0.0-20.3)	Laurel	WAH, PCR, SCR, OSRW	
Sims Fork of Left Fork of Straight Creek	Basin	Bell	WAH, PCR, SCR, OSRW	
Smith Creek of Franks Creek	Basin	Letcher	WAH, PCR, SCR, OSRW	
South Fork of Cumberland River	River Mile 44.3 (Blue Heron) to River Mile 54.8 (Kentucky /Tennessee State Line)	McCreary	WAH, PCR, SCR, OSRW	
South Fork of Rockcastle River	River Mile 2.1 to White Oak Creek (River Mile 5.8)	Laurel	WAH, PCR, SCR, OSRW	
South Fork of Rockcastle	Rockcastle River (River Mile 0.0) to	Rockcastle	WAH, PCR, SCR,	

River	River Mile 2.1		OSRW	
Stevenson Branch of Bennetts Fork of Yellow Creek	Basin	Bell	WAH, PCR, SCR, OSRW	
Sulphur Creek of Wolf River of Obey River	Dale Hollow Reservoir Backwaters to Headwaters (1.7-5.1)	Clinton	WAH, PCR, SCR, OSRW	
Trace Branch of Stinking Creek	Basin	Knox	WAH, PCR, SCR, OSRW	
Trammel Fork of Marsh Creek	Basin	McCreary	WAH, PCR, SCR, OSRW	
Turkey Creek of Stinking Creek	Basin	Knox	WAH, PCR, SCR, OSRW	
Tyes Fork of Bennetts Fork of Patterson Creek	Basin	Whitley	WAH, PCR, SCR, OSRW	
Unidentified Tributary (across from Hemlock Grove) of Rock Creek of South Fork of Cumberland River	Mouth to Headwaters (0.0-1.2)	McCreary	WAH, PCR, SCR, OSRW	
Unidentified Tributary (RMI 17.0 of Rock Creek) of Rock Creek of South Fork of Cumberland River	Mouth to Headwaters (0.0-1.3)	McCreary	WAH, PCR, SCR, OSRW	
Watts Branch of Rock Creek	Basin	McCreary	WAH, PCR, SCR, OSRW	
Watts Creek of Cumberland River	Basin above Camp Blanton Lake (2.4)	Harlan	WAH, PCR, SCR, OSRW	
White Oak Creek of Rock Creek	Basin	McCreary	WAH, PCR, SCR, OSRW	
White Oak Creek of Sinking Creek	Basin above River Mile 0.9 (includes Little White Oak Creek)	Laurel	CAH, PCR, SCR	
Wood Creek of Little Rockcastle River	Confluence with Hazel Patch Creek (0.0) to River Mile 1.9 (Wood Creek Lake Dam)	Laurel	CAH, PCR, SCR	
Youngs Creek of Cumberland River	Basin	Whitley	WAH, PCR, SCR, OSRW	
LAKES AND RESERVOIRS				
Beulah (=Tyner)	Entire Reservoir	Jackson	WAH, CAH, PCR, SCR	
Cannon Creek	Entire Reservoir	Bell	WAH, CAH, PCR, SCR	
Laurel River	Entire Reservoir	Laurel/ Whitley	WAH, CAH, PCR, SCR	
Wood Creek	Entire Reservoir	Laurel	WAH, CAH, PCR, SCR	
TENNESSEE RIVER BASIN				
Blood River of Kentucky Lake (Tennessee River)	McCullough Fork to Tennessee State Line (15.15-18.7)	Calloway	WAH, PCR, SCR, OSRW	
Clarks River of Tennessee River	Persimmon Slough to Middle Fork Creek (28.7-30.7)	Marshall	WAH, PCR, SCR, OSRW	
Grindstone Creek of Kentucky Lake (Blood River of Tennessee River)	Kentucky Lake Backwaters to Headwaters (0.7-2.9)	Calloway	WAH, PCR, SCR, OSRW	
Panther Creek of Kentucky Lake (Blood River of Tennessee River)	Kentucky Lake Backwaters to Headwaters (0.5-5.7)	Calloway	WAH, PCR, SCR, OSRW	
Soldier Creek of West Fork of Clarks River	Mouth to South Fork of Soldier Creek (0.0-5.7)	Marshall	WAH, PCR, SCR, OSRW	
Sugar Creek of Kentucky Lake (Tennessee River)	Kentucky Lake Backwaters to Buzzard Roost Road (2.5-3.2)	Calloway	WAH, PCR, SCR, OSRW	
Sugar Creek of West Fork of Clarks River	Mouth to Unnamed Reservoir (0.0-3.9)	Graves	WAH, PCR, SCR, OSRW	
Tennessee River	River Mile 23.1 (Kentucky Lake Dam) to River Mile 12.4 (12.4-23.1)	Livingston/ McCracken/ Marshall	WAH, PCR, SCR, OSRW	
Trace Creek of West Fork of Clarks River	Mouth to Neeley Branch (0.0-3.35)	Graves	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Unidentified Tributary of Panther Creek of West Fork of Clarks River	Mouth to Headwaters (0.0-1.7)	Graves	WAH, PCR, SCR, OSRW	
West Fork of Clarks River	Soldier Creek to Duncan Creek	Graves	WAH, PCR, SCR,	

	(20.1-23.5)		OSRW	
Wildcat Creek of Kentucky Lake (Blood River of Tennessee River)	Ralph Wright Road Crossing to Headwaters 2.8-6.8)	Calloway	WAH, PCR, SCR, OSRW	
OHIO RIVER BASIN (Main Stem and Minor Tributaries)				
Crooked Creek	Rush Creek to City Lake Dam (17.9-26.2)	Crittenden	WAH, PCR, SCR, OSRW	
Doe Run Creek	Hwy 1638 to Headwaters (5.2-8.3)	Meade	CAH, PCR, SCR	
Double Lick Creek of Woolper Creek	Mouth to Headwaters (0.0-3.5)	Boone	WAH, PCR, SCR, OSRW	
Garrison Creek	Mouth to Headwaters (0.0-4.85)	Boone	WAH, PCR, SCR, OSRW	
Kinniconick Creek	McDowell Creek to Headwaters (5.05-50.9)	Lewis	WAH, PCR, SCR, OSRW	
Little South Fork of Big South Fork	Land Use Change to Headwaters (1.2-5.9)	Boone	WAH, PCR, SCR, OSRW	
Middle Fork of Massac Creek	Hines Road to Headwaters (3.1-6.4)	McCracken	WAH, PCR, SCR, OSRW	
Ohio River	River Mile 848.0 to River Mile 850.0	Union	WAH, PCR, SCR, OSRW	
Ohio River	River Mile 859.0 to River Mile 861.0	Union	WAH, PCR, SCR, OSRW	
Ohio River	River Mile 865.0 to River Mile 867.0	Union	WAH, PCR, SCR, OSRW	
Ohio River	River Mile 923.5 to River Mile 926.0	Livingston	WAH, PCR, SCR, OSRW	
Ohio River	River Mile 927.0 to River Mile 930.0	Livingston	WAH, PCR, SCR, OSRW	
Ohio River	River Mile 940.7 to River Mile 943.3	McCracken	WAH, PCR, SCR, OSRW	
Ohio River	River Mile 948.2 to River Mile 949.5	McCracken	WAH, PCR, SCR, OSRW	
Ohio River	River Mile 960.0 to River Mile 962.7 (above Lock and Dam 53)	Ballard	WAH, PCR, SCR, OSRW	
Ohio River	River Mile 966.3 to River Mile 969.5	Ballard	WAH, PCR, SCR, OSRW	
Ohio River	River Mile 922.0 to River Mile 923.5 (Channel East of Towhead Island)	Livingston	WAH, PCR, SCR, OSRW	
Otter Creek	Ohio River to River Mile 9.7	Meade	CAH, PCR, SCR	
Second Creek	Ohio River Backwaters to Headwaters (0.2-2.7)	Boone	WAH, PCR, SCR, OSRW	
Sinking Creek	Hwy 259 to Headwaters (includes Blue & Stony Forks)	Breckinridge	CAH, PCR, SCR	
Unidentified Tributary of Big Sugar Creek	I-71 to Headwaters (1.0-1.8)	Gallatin	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Corn Creek	Mouth to Headwaters (0.0-2.3)	Trimble	WAH, PCR, SCR, OSRW	
Unidentified Tributary of Massac Creek	Mouth to Headwaters (0.0-1.7)	McCracken	WAH, PCR, SCR, OSRW	
West Fork of Massac Creek	SR 725 to Little Massac Creek (1.0-6.2)	McCracken	WAH, PCR, SCR, OSRW	
White Oak Creek	Mouth (Ohio River) to River Mile 1.08	Greenup	SCR	401 KAR 10:031, Section 2(1)(d) and 2(2) do not apply.
Yellowbank Creek	Ohio River Backwaters to Headwaters (1.8-11.8)	Breckinridge	WAH, PCR, SCR, OSRW	
LAKES AND RESERVOIRS				
Metropolis	Entire Lake	McCracken	WAH, PCR, SCR, OSRW	
MISSISSIPPI RIVER BASIN (Main Stem and Minor Tributaries)				
Bayou de Chien	River Mile 15.4 to Headwaters (River Mile 32.9)	Hickman/ Graves	WAH, PCR, SCR, OSRW	
Cane Creek of Bayou de Chien	Basin	Graves	WAH, PCR, SCR, OSRW	
Jackson Creek of Bayou de Chein	Basin	Graves	WAH, PCR, SCR, OSRW	
Jackson Creek	Mouth to Headwaters	Graves	WAH, PCR, SCR, OSRW	
Mississippi River	River Mile 935.0 to River Mile 930.0	Carlisle	WAH, PCR, SCR, OSRW	

Mississippi River	River Mile 947.0 to River Mile 945.0	Carlisle	WAH, PCR, SCR, OSRW	
Obion Creek	Hurricane Creek to Little Creek (26.35-36.55)	Hickman	WAH, PCR, SCR, OSRW	
Sand Creek of Bayou de Chien	Basin	Graves	WAH, PCR, SCR, OSRW	
South Fork of Bayou de Chien	Basin	Graves	WAH, PCR, SCR, OSRW	
Terrapin Creek	Tennessee State Line to Headwaters (2.7-6.0)	Graves	WAH, PCR, SCR, OSRW	
LAKES AND RESERVOIRS				
Murphy's Pond	Entire Pond and Preserve Area	Hickman	WAH, PCR, SCR, OSRW	
Swan Pond	Entire Lake	Ballard	WAH, PCR, SCR, OSRW	

Section 6. Incorporation by Reference. (1) "Interim Economic Guidance for Water Quality Standards Workbook", EPA, March 1995 Publication EPA-823-B-95-002. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., is incorporated by reference.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Kentucky Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky, Monday through Friday, 8 a.m. to 4:30 p.m. (5 Ky.R. 825; Am. 6 Ky.R. 339; eff. 12-5-79; 11 Ky.R. 424; 708; eff. 11-13-84; 1132; 1372; eff. 4-9-85; 16 Ky.R. 809; 1356; 2655; eff. 5-31-90; 26 Ky.R. 130; 8804; 1131; eff. 12-8-99; 30 Ky.R. 1010; 1791; 31 Ky.R. 547; eff. 9-8-2004; TAm eff. 8-9-2007, Recodified from 401 KAR 5:026, 6-11-2008; 35 Ky.R. 129; 860; 2679; eff. 7-6-2009.)

401 KAR 10:029. General provisions.

RELATES TO: KRS 146.200-146.360, 146.410-146.535, 146.550-146.570, 146.600-146.619, 146.990, 224.01-010, 224.01-400, 224.16-050, 224.16-070, 224.70-100-224.70-140, 224.71-100-224.71 145, 224.73 100 224.73 120, 40 C.F.R. 136, 33 U.S.C. 1326(a), EO 2008 507, 2008-531

STATUTORY AUTHORITY: KRS 146.220, 146.241, 146.270, 146.410, 146.450, 146.460, 146.465, 224.10-100, 224.16-050, 224.16-060, 224.70-100, 224.70-110, 40 C.F.R. 131, 136, 16 U.S.C. 1531-1544, 33 U.S.C. 1311, 1312, 1313, 1314, 1316, 1341

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 requires the cabinet to develop and conduct a comprehensive program for the management of water resources and to provide for the prevention, abatement, and control of water pollution. This administrative regulation and 401 KAR 10:001, 10:026, 10:030, and 10:031 establish procedures to protect the surface waters of the commonwealth, and thus protect water resources. EO 2008-507 and 2008-531, effective June 16, 2008, abolish the Environmental and Public Protection Cabinet and establish the new Energy and Environment Cabinet. This administrative regulation establishes the commonwealth's surface water antidegradation policy, provides for withdrawals of waters not meeting water quality standards, and addresses sample collection and analytical methodology and mixing zones.

Section 1. Antidegradation Policy. (1) The purpose of 401 KAR 10:026 through 401 KAR 10:031 is to safeguard the surface waters of the commonwealth for their designated uses, to prevent the creation of new pollution of these waters, and to abate, existing pollution.

(2) Where the quality of surface waters exceeds that necessary to support propagation of fish, shellfish, wildlife and recreation in and on the water, that quality shall be maintained and protected unless the cabinet finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the cabinet's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

(a) For point source discharges, water quality shall be maintained and protected in these waters according to the procedures specified in 401 KAR 10:030, Section 1(2)(b) or (3)(b).

(b) In allowing degradation or lower water quality, the cabinet shall assure water quality adequate to protect existing uses fully.

(c) The cabinet shall assure that there shall be achieved the highest statutory and regulatory requirements for waste treatment by all new and existing point sources and that nonpoint sources of pollutants be controlled by application of all cost effective and reasonable best management practices.

(3) Water quality shall be maintained and protected in a water categorized as an outstanding national resource water according to the procedures specified in 401 KAR 10:030, Section 1(1)(b).

(4) Water quality shall be maintained and protected in those waters designated as outstanding state resource waters according to the procedures specified in 401 KAR 10:031, Section 8.

(5) If potential water quality impairment associated with a thermal discharge is involved, a successful demonstration conducted under Section 316 of the Clean Water Act, 33 U.S.C. 1326, shall be in compliance with this section.

Section 2. Withdrawal of Contaminated Water. Surface waters occasionally do not meet the criteria established in 401 KAR 10:031.

(1) Withdrawal and subsequent discharge of these waters without alteration of the physical or chemical characteristics into the same or similar surface water shall not be considered a violation of water quality standards.

(2) The cabinet shall determine KPDES permit limitations in these situations based on the quality of the raw and receiving waters.

(3) The cabinet retains the right to require permit modification under the provisions of 401 KAR 5:035, 5:065, 5:070, 5:075, and 5:080.

Section 3. Sample Collection and Analytical Methodology. (1) All methods of preservation and analysis used to determine conformity or nonconformity with water quality standards shall be governed by 40 C.F.R. 136, as amended, if applicable.

(2) Sample collection and other methods not established in subsection (1) of this section may be used as appropriate if they:

(a) Meet commonly accepted quality assurance and quality control principles;

(b) Are within the accuracy required for determining conformity or nonconformity with water quality standards; and

(c) Receive prior written approval by the cabinet.

Section 4. Mixing Zones. The following requirements shall apply to a mixing zone:

(1) The cabinet may assign definable geometric limits for mixing zones for a discharge of a pollutant or pollutants within a discharge based

on the following criteria:

(a) Applicable limits shall include the linear distances from the point of discharge, surface area involvement, volume of receiving water, and shall take into account other nearby mixing zones;

(b) Dilution provided by assigned mixing zones shall not be allowed until applicable limits are assigned by the cabinet in accordance with this section;

(c) In a stream or river, unless assigned on or before December 8, 1999, an assigned mixing zone, from the point of discharge in a spatial direction, shall not exceed one-third (1/3) of the width of the receiving stream or one-half (1/2) of the cross-sectional area;

(d) In a lake or a reservoir, unless assigned on or before December 8, 1999, an assigned mixing zone, from the point of discharge in any spatial direction, shall not exceed one-tenth (1/10) of the width of the lake, or reservoir at the discharge point;

(e) An assigned mixing zone shall be limited to an area or volume that shall not adversely affect the designated uses of the receiving water and shall not be so large as to adversely affect an established community of aquatic organisms;

(f) The location of a mixing zone shall not:

1. Interfere with fish spawning or nursery areas, fish migration routes, public water supply intakes, or bathing areas;

2. Preclude the free passage of fish or other aquatic life; or

3. Jeopardize the continued existence of endangered or threatened aquatic species listed under Section 4 of the Endangered Species Act, 16 U.S.C. 1531 through 1544, or result in the destruction or adverse modification of their critical habitat;

(g) For thermal discharges, a successful demonstration conducted under Section 316(a) of the Clean Water Act, 33 U.S.C. Section 1326

(a), shall constitute compliance with this section; and

(h) Unless assigned by the cabinet on or before September 8, 2004, there shall not be mixing zones for bioaccumulative chemicals of concern.

1. A mixing zone that was assigned by the cabinet for a bioaccumulative chemical of concern shall not expire later than September 8, 2014.

2.a. A bioaccumulative chemical of concern is one that accumulates in one (1) or more aquatic organisms by a human health bioaccumulation factor of greater than 1,000.

b. For the purposes of this administrative regulation, bioaccumulative chemicals of concern shall consist of the following:

(i) alpha-Hexachlorocyclohexane;

(ii) beta-Hexachlorocyclohexane;

(iii) Chlordane;

(iv) DDD;

(v) DDE;

(vi) DDT;

(vii) delta-Hexachlorocyclohexane;

(viii) Dieldrin;

(ix) Hexachlorobenzene;

(x) Hexachlorobutadiene;

(xi) Hexachlorocyclohexane;

(xii) Lindane;

(xiii) Mercury;

(xiv) Mirex;

(xv) Octachlorostyrene;

(xvi) PCBs;

(xvii) Pentachlorobenzene;

(xviii) Photomirex;

(xix) Toxaphene;

(xx) 1,2,3,4-Tetrachlorobenzene;

(xxi) 1,2,4,5-Tetrachlorobenzene; and

(xxii) 2,3,7,8-TCDD (Dioxin).

(2) Concentrations of toxic substances that exceed the acute criteria for protection of aquatic life in 401 KAR 10:031 shall not exist within an assigned mixing zone or in the discharge itself unless a zone of initial dilution is assigned.

(a) A zone of initial dilution shall be assigned pursuant to subsection (3) of this section.

(b) Chronic criteria for the protection of aquatic life and criteria for the protection of human health from the consumption of fish tissue shall be met at the edge of the assigned mixing zone.

(3) The following requirements shall apply to a zone of initial dilution:

(a) The cabinet shall require an applicant to provide a technical evaluation for a zone of initial dilution;

(b) Concentrations of toxic substances shall not exceed the acute criteria for the protection of aquatic life at the edge of the assigned zone of initial dilution, except, numeric acute criteria may be exceeded within the zone if the frequency and duration of exposure of aquatic organisms are not sufficient to cause acute toxicity; and

(c) Unless assigned on or before December 8, 1999, a zone of initial dilution for a pollutant shall not be allowed in an exceptional water.

(4) Unless assigned on or before the most recent effective date of this administrative regulation, a zone of initial dilution for a pollutant shall be available only to a submerged high-rate multiport outfall structure and shall be limited in size to the most restrictive of the following:

(a) The acute criteria shall be met within ten (10) percent of the distance from the edge of the outfall structure to the edge of the regulatory mixing zone in a spatial direction;

(b) The acute criteria shall be met within a distance of fifty (50) times the square root of the cross-sectional area of a discharge port, in a spatial direction; or

(c) The acute criteria shall be met in a horizontal direction within a distance of five (5) times the natural water depth that prevails under mixing zone design conditions, and exists before the installation of a discharge outlet. (5 Ky.R. 827; Am. 6 Ky.R. 341; eff. 12-5-79; 11 Ky.R. 1141; 1380; eff. 4-9-85; 16 Ky.R. 833; 1367; 2676; eff. 5-31-90; 2257; 2676; eff. 7-11-90; 26 Ky.R. 141; 815; 1141; eff. 12-8-99; 30 Ky.R. 1021; 31 Ky.R. 556; eff. 9-8-2004; TAm eff. 8-9-2007, Recodified from 401 KAR 10:029, 6-11-2008; 35 Ky.R. 157; 904; 2721; eff. 7-6-2009.)

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401 KAR 10:030. Antidegradation policy implementation methodology.

RELATES TO: KRS 146.200-146.360, 146.410-146.535, 146.550-146.570, 146.600-146.619, 146.990, 224.01-010, 224.01-400, 224.16-050, 224.16-070, 224.70-100-224.70-140, 224.71-100-224.71-145, 224.73-100-224.73-120

STATUTORY AUTHORITY: KRS 146.220, 146.241, 146.270, 146.410, 146.450, 146.460, 146.465, 224.10-100, 224.16-050, 224.16-060, 224.70-100, 224.70-110, 40 C.F.R. Parts 130, 131, 16 U.S.C. 1271 et seq., 1531 et seq., 33 U.S.C. 1311, 1313, 1314, 1315, 1316, 1341, 1342, 1344

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 requires the Environmental and Public Protection Cabinet to develop and conduct a comprehensive program for the management of water resources and to provide for the prevention, abatement, and control of all water pollution. KRS 224.70-100 declares that the policy of the commonwealth is to conserve its waters for legitimate uses and to: safeguard from pollution the uncontaminated waters of the commonwealth, prevent the creation of any new pollution in the waters of the commonwealth, and abate any existing pollution. This administrative regulation and 401 KAR 5:002, 5:026, 5:029, and 5:031 establish procedures to protect the surface waters of the commonwealth, and thus protect water resources. This administrative regulation establishes a methodology to implement the antidegradation policy contained in 401 KAR 5:029 by establishing procedures to control water pollution in waters affected by that policy.

Section 1. Categorization and Implementation. The following procedures shall govern implementation of the antidegradation policy of 401 KAR 5:029, Section 1, for a point source discharge. A flow chart outlining the procedures is incorporated by reference for informational purposes in Section 3 of this administrative regulation. These antidegradation procedures shall not preempt the power or authority of a local government to provide by ordinance for a higher level of protection through antidegradation implementation for a discharger located within that local government's jurisdiction to a surface water of the commonwealth. Surface waters shall be placed into one (1) of four (4) categories listed in this section and each category shall have implementation procedures as follows:

(1) Outstanding national resource water. Surface waters of the commonwealth categorized as outstanding national resource waters are listed in Table 1 of this subsection.

Table 1 SURFACE WATERS CATEGORIZED AS OUTSTANDING NATIONAL RESOURCE WATER			
Stream	Segment	River Miles	County
Red River	Upstream to Island off SR 1067 to Downstream Wild River Boundary at SR 746	49.2-68.6	Menifee/Wolfe
Underground River System	Within Mammoth Cave National Park Boundary		Edmonson/Hart/Barren
Big South Fork of Cumberland River	Downstream Wild River Boundary to Tennessee Stateline	45.0-55.2	McCreary

(a) Categorization criteria. A surface water shall be categorized as an outstanding national resource water if the surface water meets, at a minimum, the requirements for an outstanding state resource water as provided in 401 KAR 5:031, Section 8, and if the surface water demonstrates national ecological or recreational significance.

(b) Implementation procedure. Water quality shall be maintained and protected in outstanding national resource water. A new discharger or expanded discharge which may result in permanent or long-term changes in water quality is prohibited. The cabinet may approve temporary or short-term changes in water quality if the changes to the outstanding national resource water have no demonstrable impact on the ability of the water to support the designated uses.

(2) Exceptional water. Surface waters of the commonwealth categorized as exceptional water are listed in Table 2 of this subsection.

Table 2 SURFACE WATERS CATEGORIZED AS EXCEPTIONAL WATER			
Stream	Segment	River Miles	County
BIG SANDY RIVER BASIN			
Hobbs Fork*	Mouth to Headwaters	0.0-3.8	Martin

Hobbs Fork Unidentified Tributary*	Hobbs Fork to Headwaters	0.0-0.55	Martin
Lower Pigeon Branch*	Left Fork to Headwaters	0.5-1.7	Pike
Russell Fork*	Clinch Field RR Yard off HWY 80 to Virginia Stateline	14.4-16	Pike
Toms Branch*	Mouth to Headwaters	0.0-1.4	Pike
LITTLE SANDY RIVER BASIN			
Arabs Fork*	Clay Fork to Headwaters	0.0-4.7	Carter
Big Caney Creek*	Grayson Lake to Headwaters	0.0-14.9	Elliott
Big Sinking Creek*	SR 986 to Clay Fork and Arab Fork	10.7-15.2	Carter
Meadow Branch*	Mouth to Headwaters	0.0-1.4	Elliott
Middle Fork Little Sandy River*	Mouth to Sheepskin Branch	0.0-3.6	Elliott
Nichols Fork*	Green Branch to Headwaters	0.0-1.9	Elliott
Laurel Creek*	Carter School Rd Bridge to Headwaters	7.6-14.4	Elliott
LICKING RIVER BASIN			
Blackwater Creek*	Eaton Creek to Greasy Fork	3.8-11.4	Morgan
Botts Fork	Mouth to Landuse Change	0.0-2.1	Menifee
Brushy Fork	Cave Run Lake Backwaters to Headwaters	0.6-5.0	Menifee
Brushy Fork*	Mouth to Headwaters	0.0-5.7	Pendleton
Bucket Branch*	Mouth to Headwaters	0.0-1.9	Morgan
Craney Creek	Mouth to Headwaters	0.0-10.0	Rowan
Devils Fork*	Mouth to Headwaters	0.0-7.8	Morgan
Grovers Creek*	Kincaid Lake Backwaters to Unidentified Tributary	0.5-3.4	Pendleton
Licking River	SR 211 to unnamed Rd off Slatey Point Rd	154.5-165.0	Bath/Rowan
North Fork of Licking River*	Cave Run Lake Backwaters to Devils Fork	9.9-14.2	Morgan
Slabcamp Creek	Mouth to Headwaters	0.0-3.4	Rowan
South Fork Grassy Creek*	Mouth to Greasy Creek	0.0-19.6	Pendleton
Welch Fork*	Mouth to First Road Crossing	0.0-1.0	Menifee
West Creek*	Mouth to Headwaters	0.0-9.5	Robertson
KENTUCKY RIVER BASIN			
Big Double Creek*	Mouth to Headwaters	0.0-6.5	Clay
Bill Branch*	Mouth to Right Fork and Left Fork Creek	0.0-2.2	Leslie
Buffalo Creek*	Mouth to Right Fork and Left Fork	0.0-1.6	Owsley
Cavanaugh Creek*	South Fork of Station Camp Creek to Foxtown Rd	0.0-5.3	Jackson
Cawood Branch*	Mouth to Headwaters	0.0-2.1	Leslie
Cedar Creek Unidentified Tributary*	Mouth to Headwaters	0.0-1.4	Owen
Chester Creek*	Mouth to Headwaters	0.0-2.8	Wolfe
Clear Creek*	Mouth to East Fork Clear Creek	0.0-8.8	Woodford
Clemons Fork*	Mouth to Headwaters	0.0-4.7	Breathitt
Coles Fork*	Mouth to Headwaters	0.0-5.5	Breathitt
Drennon Creek*	Flat Bottom Road Crossing to Town Branch	10.5-11.9	Henry
East Fork of Indian Creek*	West Fork of Indian Creek to Headwaters	0.0-8.5	Menifee
Elisha Creek*	Elisha Creek Rd Crossing to Right Fork and Middle Fork Elisha Creek	0.95-1.7	Leslie
Emily Run	Mouth to Unidentified Tributary	0.0-3.9	Henry
Evans Fork*	Mouth to Headwaters	0.0-2.9	Estill
Falling Rock Branch*	Mouth to Headwaters	0.0-0.6	Breathitt
Gladie Creek*	Mouth to Headwaters	0.0-8.4	Menifee
Glenns Creek Unidentified Tributary	Landuse Change to Headwaters	0.2-1.3	Woodford

Goose Creek	Mouth to Laurel Creek	0.0-9.3	Clay
Griers Creek*	Urban Area to Unidentified Tributary	2.9-3.4	Woodford
Grindstone Creek*	Mouth to Headwaters	0.0-2.2	Franklin
Hardwick Creek	Mouth to Little Hardwick Creek	0.0-3.2	Powell
Hell For Certain	Mouth to Big Fork	0.0-2.1	Leslie
Hines Creek*	Mouth to Hines Creek Road Crossing	0.0-2.4	Madison
Honey Branch	Mouth to Headwaters	0.0-1.4	Leslie
Hopper Cave* Branch	Mouth to Headwaters	0.0-1.6	Jackson
Indian Creek*	Backwater Kentucky River to Headwaters	0.55-4.7	Carroll
Indian Fork*	Mouth to Headwaters	0.0-3.3	Shelby
John Carpenter Fork*	Mouth to Headwaters	0.0-1.5	Breathitt
Left Fork Big Double Creek*	Mouth to Headwaters	0.0-1.5	Clay
Line Fork*	Defeated Creek to Headwaters	11.6-27.5	Letcher
Line Fork Unidentified Tributary* (LCW)	Mouth to Headwaters	0.0-0.55	Letcher
Little Millseat Branch*	Mouth to Headwaters	0.0-1.2	Breathitt
Little Sixmile Creek*	Mouth to Headwaters	0.0-5.2	Henry
Lulbegrud Creek	Mouth to Falls Branch	0.0-7.3	Clark/Powell
Middle Fork of Kentucky River	Mouth to Upper Twin Creek	0.0-12.5	Lee
Middle Fork of Kentucky River	Hyden, Kentucky to Greasy Creek	76.1-84.0	Leslie
Middle Fork of Red River	South Fork Red River to Natural Bridge State Park Lake	1.8-8.3	Powell
Mill Creek*	Mouth to Headwaters	0.0-8.3	Owen
Millseat Branch*	Mouth to Headwaters	0.0-1.9	Breathitt
Muddy Creek*	Elliston, Kentucky to Viney Creek	13.4-20.2	Madison
Musselman Creek*	Mouth to Headwaters	0.0-8.4	Grant
Red Bird River	Mouth to Big Creek	0.0-15.0	Clay
Right Fork of Buffalo Creek*	Mouth to Headwaters	0.0-11.2	Owsley
Roaring Fork*	Mouth to Headwaters	0.0-0.85	Breathitt
Sand Ripple Creek*	Mouth to Headwaters	0.0-3.9	Henry
Severn Creek*	Mouth to North Fork Severn Creek	0.0-2.8	Owen
Shelly Rock Fork*	Mouth to Headwaters	0.0-0.6	Breathitt
Sixmile Creek*	Little Sixmile to Dam	6.9-14.7	Henry
South Fork of Kentucky River	Mouth to Sexton Creek	0.0-27.7	Owsley
South Fork of Red River	Mouth to Sandlick Fork	0.0-3.9	Powell
South Fork of Station Camp Creek*	Mouth to Rock Lick Creek	0.0-9.6	Jackson
Spruce Branch*	Mouth to Headwaters	0.0-1.1	Leslie
Station Camp Creek*	Landuse Change to South Fork Station Camp Creek	19.0-22.3	Estill
Steer Fork*	Mouth to Headwaters	0.0-2.9	Jackson
Sturgeon Creek*	Duck Fork to Little Sturgeon Creek	1.3-13.7	Lee
Sugar Creek*	Landuse Change to Headwaters	0.8-3.8	Leslie
War Fork*	Mouth to Headwaters	0.0-13.7	Jackson
Wolfpen Creek*	Mouth to Headwaters	0.0-3.2	Menifee
SALT RIVER BASIN			
Brashears Creek	Guist Creek to Bullskin and Clear Creek	13.0-25.5	Shelby
Cedar Creek*	Mouth to Greens Branch	0.0-5.1	Bullitt
Chaplin River*	Thompson Creek to Cornishville, KY	40.1-53.7	Washington

Guist Creek	Mouth to Jephtha Creek	0.0-15.4	Spencer
Harts Run*	Mouth to Headwaters	0.0-2.3	Bullitt
Otter Creek*	Landuse Change to East Fork and Middle Fork Otter Creek	1.7-2.7	Larue
Overalls Creek*	Mouth to Headwaters	0.0-1.3	Bullitt
Salt Lick Creek*	Mouth to Headwaters	0.0-8.4	Marion
Sulphur Creek*	Mouth to Chesse Lick and Brush Creek	0.0-9.7	Anderson
West Fork Otter Creek*	Mouth to Headwaters	0.0-4.7	Larue
Wilson Creek*	Mouth to Headwaters	0.0-17.0	Bullitt
GREEN RIVER BASIN			
Beaverdam Creek*	Mouth to Headwaters	0.0-14.1	Edmonson
Cane Run*	Nolin River Backwaters to Headwaters	1-6.5	Hart
Caney Fork*	Mouth to Headwaters	0.0-6.6	Barren
Clifty Creek*	Barton Run to Western Kentucky Parkway	7.3-17.2	Grayson
Clifty Creek*	Little Clifty Creek to Sulphur Lick	7.7-13.2	Todd
East Fork Little Barren River*	Red Lick Creek to Flat Creek	19-20.2	Metcalfe
Ellis Fork*	Mouth to Headwaters	0.0-3.2	Adair
Falling Timber Creek*	Landuse Change to Headwaters	7-15.5	Metcalfe
Fiddlers Creek*	Mouth to Headwaters	0.0-5.8	Breckinridge
Forbes Creek*	Mouth to Unidentified Tributary	0.0-3.9	Christian
Gasper River*	Clear Fork to Wiggington Creek	17.0-35.2	Logan
Goose Creek*	Mouth to Little Goose Creek	0.0-8.1	Casey
Green River	Downstream Mammoth Cave National Park Boundary to Lynn Camp Creek	181.7-207.8	Edmonson
Green River Unidentified Tributary*	Landuse Change to Headwaters	0.8-3.2	Adair
Halls Creek*	Unidentified Tributary to Headwaters	9.6-12.1	Ohio
Lick Creek*	Mouth to Headwaters	0.0-9.9	Simpson
Linders Creek*	Mouth to Sutzer Creek	0.0-7.7	Hardin
Little Beaverdam Creek	Mouth to SR 743	0.0-11.3	Warren
Little Short Creek*	Mouth to Headwaters	0.0-3.0	Grayson
Lynn Camp Creek*	Mouth to Lindy Creek	0.0-8.3	Hart
McFarland Creek*	Grays Branch to Unidentified Tributary	1.4-4.8	Christian
Meeting Creek*	Little Meeting Creek to Petty Branch	5.2-13.8	Hardin
Muddy Creek*	Landuse Change to Headwaters	13.0-15.5	Ohio
North Fork Rough River*	Buffalo Creek to Reservoir Dam	23.44-28.1	Breckinridge
Peter Creek*	Caney Fork to Dry Fork	11.6-18.5	Barren
Pond Run*	Landuse Change to Headwaters	1.4-6.8	Breckinridge/Ohio
Rough River*	Linders Creek to Vertrees Creek	136.9-147.8	Hardin
Russell Creek*	Mouth to Columbia WWTP	0.0-40.0	Adair
Russell Creek*	Reynolds Creek to Headwaters	55.9-68.2	Adair
Sixes Creek*	Wild Branch to Headwaters	2.0-7.5	Ohio
Sulphur Branch*	Mouth to Headwaters	0.0-2.0	Edmonson
Trammel Fork*	Mouth to Tennessee Stateline	0.0-30.15	Allen
West Fork Pond River*	Unidentified Tributary to East Branch Pond River	12.7-22.5	Christian
White Oak Creek Unidentified Tributary*	Hovious Rd Crossing to SR 76	0.4-3.0	Adair
LOWER CUMBERLAND RIVER BASIN			

Crooked Creek*	Lake Barkley Backwaters to Headwaters	4.0-9.4	Trigg
Donaldson Creek*	Craig Branch to Unidentified Tributary	6.9-10.3	Trigg
Elk Creek*	Tennessee Stateline to Dry Branch	7.5-9.8	Logan
Sugar Creek*	Lick Creek to Unidentified Tributary	2.1-6.7	Livingston
West Fork of Red River*	Tennessee Stateline to Montgomery Creek	16.1-26.5	Christian
Whippoorwill Creek*	Mouth to Vicks Branch	0.0-13.0	Logan
TENNESSEE RIVER BASIN			
Blood River*	McCullough Fork to Tennessee Stateline	12.2-15.65	Calloway
Clarks River	Persimmon Slough to Middle Fork Creek	26.6-28.4	Marshall
Grindstone Creek*	Mouth to Headwaters	0.0-2.3	Calloway
Panther Creek*	Mouth to Headwaters	0.0-5.1	Calloway
Panther Creek*	Channelization to Impoundment	1.1-6.0	Graves
Panther Creek Unidentified Tributary*	Mouth to Headwaters	0.0-2.1	Graves
Soldier Creek*	Mouth to South Fork Solider	0.0-5.3	Marshall
Sugar Creek*	Kentucky Lake Backwaters to Buzzard Roost Road	2.1-3.3	Calloway
Sugar Creek*	Mouth to Unnamed Reservoir	0.0-4.0	Graves
Trace Creek*	Mouth to Neeley Branch	0.0-3.0	Graves
West Fork Clarks River*	Soldier Creek to Duncan Creek	19.7-22.7	Graves
Wildcat Creek*	Ralph Wright Road Crossing to Headwaters	3.5-6.7	Calloway
TRADEWATER RIVER BASIN			
East Fork Flynn Fork*	Landuse Change to Headwaters	2.5-4.6	Caldwell
Piney Creek*	Lake Beshear Backwaters to Headwaters	4.5-10.2	Caldwell
Piney Creek Unidentified Tributary*	Mouth to Headwaters	0.0-2.9	Caldwell
Sandlick Creek*	Camp Creek to Headwaters	4.9-9.0	Christian
Sandlick Creek Unidentified Tributary*	Mouth to Headwaters	0.0-1.4	Christian
Tradewater River*	Dripping Springs Branch to Buntin Lake Dam	123.2-131.1	Christian
OHIO RIVER BASIN (Main Stem and Minor Tributaries)			
Big Sugar Creek Unidentified Tributary*	I-71 to Headwaters	1.0-3.6	Gallatin
Corn Creek Unidentified Tributary*	Mouth to Headwaters	0.0-2.0	Trimble
Crooked Creek*	Rush Creek to City Lake Dam	17.5-25.6	Crittenden
Double Lick Creek*	Mouth to Landuse Change	0.0-1.4	Boone
Garrison Creek*	Mouth to Headwaters	0.0-4.1	Boone
Kinniconick Creek*	McDowell Creek to Headwaters	5.1-50.4	Lewis
Massac Creek Unidentified Tributary*	Mouth to Headwaters	0.0-1.7	McCracken
Middle Fork Massac Creek*	Hines Road to Headwaters	3.15-6.2	McCracken
West Fork Massac Creek*	SR 725 to Little Massac Creek	3.2-5.4	McCracken
Second Creek*	Private Road Crossing to Headwaters	0.5-2.9	Boone
Yellowbank Creek*	Ohio River Backwaters to Headwaters	1.4-11.4	Breckinridge
LAKES AND RESERVOIRS			
Metropolis	Entire Lake		McCracken
Swan	Entire Lake		Ballard
MISSISSIPPI RIVER BASIN (Main Stem and Minor Tributaries)			
Jackson Creek*	Mouth to Headwaters	0.0-2.6	Graves
Obion Creek*	Hurricane Creek to Little Creek	25.2-35.5	Hickman

Terrapin Creek*	Tennessee Stateline to Headwaters	2.8-7	Graves
Murphy's Pond	Entire Pond and Preserve Area		Hickman
UPPER CUMBERLAND RIVER BASIN			
Rad Branch*	Mouth to Headwaters	0.0-3.0	Letcher
Bark Camp Creek*	Mouth to Martins Fork	0.0-3.95	Whitley
Beaver Creek*	Mouth to Freeman Fork and Middle Fork	0.0-6.5	McCreary
Bee Lick Creek	Mouth to Unidentified Tributary	0.0-5.7	Pulaski
Brownies Creek*	Blacksnake Branch to Headwaters	9.0-16.0	Bell
Brush Creek	Wolf Creek to Reemergence of Sinking Creek	1.1-7.6	Rockcastle
Brushy Creek*	Mouth to Headwaters	0.0-16.0	Pulaski
Buck Creek*	Lake Cumberland Backwaters to Headwaters	5.0-62.6	Pulaski
Bunches Creek*	Mouth to Headwater	0.0-3.3	Whitley
Cane Creek*	Mouth to Headwaters	0.0-12.0	Laurel
Clifty Creek	Mouth to Rocky Branch	0.0-2.7	Pulaski
Cogur Fork*	Mouth to Headwaters	0.0-7.9	McCreary
Cumberland River	Wild River Boundaries	558.5-574.6	McCreary/ Whitley
Dog Slaughter Creek*	Mouth to North Fork and South Fork	0.0-1.1	Whitley
Eagle Creek*	Mouth to Headwaters	0.0-6.3	McCreary
Fugitt Creek*	Landuse Change to Headwaters	0.5-4.9	Harlan
Horse Lick Creek*	Mouth to Clover Bottom	0.0-12.3	Jackson
Howards Creek*	Dale Hollow lake Backwaters to Headwaters	0.8-3.4	Clinton
Indian Creek*	Laurel fork to Barren Fork	2.3-6.7	McCreary
Jackie Branch*	Mouth to Headwaters	0.0-1.7	Whitley
Kilburn Fork	Mouth to Headwaters	0.0-6.3	McCreary
Laurel Creek	Mouth to Laurel Creek Dam	0.0-9.2	McCreary
Laurel Fork*	Tennessee Stateline to Tiny Branch/Pine Creek	4.2-13.0	Whitley
Laurel Fork*	Mouth to Headwaters	0.0-12.2	Jackson
Little South Fork of Cumberland River*	Mouth to Langham Branch	0.0-35.6	Wayne
Marsh Creek*	Laurel Creek to Headwaters	8.6-26.2	McCreary
Martins Fork of Cumberland River	Wild River Boundaries	27.4-31.3	Harlan
McFarland Creek	Little McFarland Creek to Spring Branch	0.8-6.2	Monroe
Meshack Creek	Mouth to Headwaters	0.0-2.8	Monroe
Middle Fork Rockcastle River*	Mouth to Horse Lick Creek	0.0-7.8	Jackson
Mud Camp Creek*	Mouth to Collins Branch	0.0-1.3	Cumberland
Mud Camp Creek*	Unidentified Tributary to Headwaters	3.7-8.4	Monroe/Cumberland
Otter Creek	Lake Cumberland Backwaters to Carpenter Fork	14.5-22.0	Wayne
Poor Fork Cumberland River*	Franks Creek to Headwaters	46.1-51.7	Letcher
Presley House Branch*	Mouth to Headwaters	0.0-1.5	Letcher
Puncheoncamp Branch*	Mouth to Headwaters	0.0-1.9	McCreary
Rock Creek*	White Oak Creek to Tennessee Stateline	4.1-21.9	McCreary
Rock Creek Unidentified Tributary*	Mouth to Headwaters	0.0-1.9	McCreary
Rock Creek Unidentified Tributary*	Mouth to Headwaters	0.0-1.15	McCreary
Rockcastle River	Wild River Boundaries	8.5-24.4	Laurel/ Pulaski
Shillalah Creek*	Mouth to Headwaters	0.0-5.5	Bell

Sinking Creek*	Mouth to White Oak Creek	0.0-9.8	Laurel
Sulphur Creek*	Dale Hollow Backwaters to Headwaters	2.0-5.1	Clinton
South Fork of Dog Slaughter Creek*	Mouth to Headwaters	0.0-4.6	Whitley
South Fork Rockcastle River	Mouth to White Oak Creek	0.0-5.6	Laurel
Watts Branch*	Mouth to Headwaters	0.0-2.6	McCreary
Watts Creek*	Lake to Headwaters	2.2-4.3	Harlan

*Waterbodies in the cabinet's reference reach network

(a) Categorization criteria. A surface water shall be categorized as an exceptional water if any of the following criteria are met:

1. Surface water is designated as a Kentucky Wild River and is not categorized as an outstanding national resource water;
2. Surface water is designated as an outstanding state resource water as set forth in 401 KAR 5:031, Section 8(1)(a)1, 2, and 3 and Section 8(1)(b);
3. Surface water contains either of the following:
 - a. A fish community that is rated "excellent" by the use of the Index of Biotic Integrity included in "Development and Application of the Kentucky Index of Biotic Integrity (KIBI)", 2003, incorporated by reference in Section 3 of this administrative regulation; or
 - b. A macroinvertebrate community that is rated "excellent" by the Macroinvertebrate Bioassessment Index included in "The Kentucky Macroinvertebrate Bioassessment Index," 2003, incorporated by reference in Section 3 of this administrative regulation; or
4. Surface water in the cabinet's reference reach network.

(b) Implementation procedure.

1. Dischargers listed in clauses a through e of this subparagraph are subject to control by existing cabinet programs including the Kentucky Pollution Discharge Elimination System program. Subparagraphs 2 through 9 of this paragraph shall not apply to those dischargers identified in clauses a through e of this paragraph, except the cabinet shall assure water quality necessary to fully protect existing uses.

- a. "KPDES general permits for" storm water discharge;
- b. Coal mining discharge subject to regulation under the Surface Mining Control and Reclamation Act and 33 U.S.C. 1344;
- c. Domestic sewage discharge from a single-family residence;
- d. Concentrated animal feeding operations; and
- e. KPDES permit renewals and modifications that result in less than a twenty (20) percent increase in pollutant loading from the previously permitted pollutant loading.

2. Zones of initial dilution are prohibited in exceptional water unless assigned before the effective date of this administrative regulation.

3. Except as provided in subparagraph 7 of this paragraph, a KPDES permit for a new discharger or expanded discharge into exceptional water shall contain effluent limitations for the entire effluent and shall have an effluent quality of:

- a. A chronic whole effluent toxicity limitation shall apply unless an acute whole effluent toxicity limitation is more stringent; and
- b. Chloride limitations shall be based on the domestic water supply criterion of 250 mg/l.

4. Except as provided in subparagraph 7 of this paragraph, a KPDES permit for a new domestic sewage discharger or expanded domestic sewage discharge into exceptional water shall contain effluent limitations for the entire effluent and shall have an effluent quality of:

- a. No greater than ten (10) mg/l five (5) day carbonaceous biochemical oxygen demand;
- b. No greater than two (2) mg/l ammonia-nitrogen;
- c. No greater than 0.010 mg/l total residual chlorine;
- d. No greater than ten (10) mg/l total suspended solids;
- e. No greater than one (1) mg/l total phosphorous;
- f. A minimum of seven (7) mg/l dissolved oxygen;

g. An arithmetic mean value for fecal coliform bacteria not to exceed 200 colonies per 100 milliliters during a period of thirty (30) consecutive days or 400 colonies per 100 milliliters during a period of seven (7) consecutive days, or an arithmetic mean for Escherichia coli bacteria not to exceed 130 colonies per 100 milliliters during a period of thirty (30) consecutive days or 230 colonies per 100 milliliters during a period of seven (7) consecutive days; and

h. The discharge shall not cause the average instream dissolved oxygen concentration to be less than six and zero-tenths (6.0) mg/l.

5. Except as provided in subparagraph (7) of this paragraph, a KPDES permit for a new nondomestic discharger or an expanded nondomestic discharge into exceptional water shall be restricted to no more than one-half (1/2) of the water quality based limitations that would have been permitted at standard design conditions.

6. If the permit applicant accepts the effluent limitations required by subparagraphs 3, 4, and 5 of this paragraph, the KPDES permit shall be issued with these effluent limitations and additional requirements of the Kentucky Pollution Discharge Elimination System program without further antidegradation review.

7. If the permit applicant does not accept the effluent limitations required by subparagraphs 3, 4, and 5 of this paragraph, the applicant shall demonstrate to the satisfaction of the cabinet that no technologically or economically feasible alternatives exist and that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the water is located. For purposes of this administrative regulation, the approval of a POTWs regional facility plan pursuant to 401 KRS 5:006 shall demonstrate compliance with the alternatives analysis and socioeconomic demonstration for a regional facility. The alternatives analysis and socioeconomic demonstration shall follow the guidelines in "Interim Economic Guidance for Water Quality Standards Workbook", EPA, March 1995 incorporated by reference in Section 3 of this administrative regulation. The alternatives analysis shall consider the following:

- a. Discharge to other treatment facilities;
- b. Use of other discharge locations;
- c. Water reuse or recycle;
- d. Process and treatment alternatives;
- e. On-site or subsurface disposal; and
- f. Any other examination of alternatives to lowering water quality to which the cabinet and the applicant can agree.

8. A permit applicant who has failed to demonstrate to the satisfaction of the cabinet the necessity for lowering water quality shall meet the effluent limitations required by this paragraph and additional requirements of the Kentucky Pollution Discharge Elimination System program.

9. A permit applicant who demonstrates to the satisfaction of the cabinet the necessity for lowering water quality shall meet the water quality based limitations as outlined in 401 KAR 5:031.

(3) High quality water.

(a) Categorization criteria.

1. A surface water shall be categorized as high quality water if the surface water is not listed as an outstanding national resource water or an exceptional water in Table 1 or 2 of this section and if the surface water does not meet the criteria for impaired water as provided for in subsection 4(a) of this section.

2. A surface water shall be categorized as a high quality water if the surface water is listed as an outstanding state resource water in 401 KAR 5:026 and is not listed as an outstanding national resource water or an exceptional water in Table 1 or 2 of this section.

(b) Implementation procedure. KPDES permit applications for discharges into high quality water received after U.S. EPA approval of this subsection shall comply with this paragraph.

1. Dischargers listed in clauses a through e of this subparagraph are subject to control by existing cabinet programs including the Kentucky Pollution Discharge Elimination System program. Subparagraphs 2 through 6 of this paragraph shall not apply to those dischargers identified in clauses a through e of this paragraph, except the cabinet shall assure water quality necessary to fully protect existing uses.

- a. KPDES general permits for storm water discharge;
- b. Coal mining discharge subject to regulation under the Surface Mining Control and Reclamation Act, 30 U.S.C. 1201 et seq., and 33 U.S.C. 1344;
- c. Domestic sewage discharge from a single-family residence;
- d. Concentrated animal feeding operations; and
- e. KPDES permit renewals and modifications that result in less than a twenty (20) percent increase in pollutant loading from the previously permitted pollutant loading.

2. Except as provided in subparagraph 5 of this paragraph, a KPDES permit for a new domestic sewage discharger or expanded domestic sewage discharge into high quality water shall contain effluent limitations for the entire effluent and shall have an effluent quality of:

- a. No greater than ten (10) mg/l five (5) day carbonaceous biochemical oxygen demand;
- b. No greater than two (2) mg/l ammonia-nitrogen;
- c. No greater than 0.010 mg/l total residual chlorine;
- d. No greater than ten (10) mg/l total suspended solids;
- e. No greater than one (1) mg/l total phosphorous;
- f. A minimum of seven (7) mg/l dissolved oxygen; and
- g. An arithmetic mean value for fecal coliform bacteria not to exceed 200 colonies per 100 milliliters during a period of thirty (30) consecutive days or 400 colonies per 100 milliliters during a period of seven (7) consecutive days, or an arithmetic mean for *Escherichia coli*

bacteria not to exceed 130 colonies per 100 milliliters during a period of thirty (30) consecutive days or 230 colonies per 100 milliliters during a period of seven (7) consecutive days.

3. Except as provided in subparagraph 5 of this paragraph, a KPDES permit for a new nondomestic discharger or an expanded nondomestic discharge into high quality water shall be restricted to no more than one-half (1/2) of the water quality based limitations that would have been permitted at standard design conditions.

4. If the permit applicant accepts the effluent limitations required by subparagraphs 2 and 3 of this paragraph, the KPDES permit shall be issued with these effluent limitations and any additional requirements of the Kentucky Pollution Discharge Elimination System program without further antidegradation review.

5. If the permit applicant does not accept the effluent limitations required by subparagraphs 2 and 3 of this paragraph, the applicant may request water quality based limitations permitted at standard design conditions. In making this request, the applicant shall demonstrate to the satisfaction of the cabinet that no technologically or economically feasible alternatives exist and that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the water is located. For purposes of this administrative regulation, the approval of a POTW's regional facility plan pursuant to 401 KAR 5:006 shall demonstrate compliance with the alternatives analysis and socioeconomic demonstration for a regional facility. The alternatives analysis and socioeconomic demonstration shall consider the following:

- a. Discharge to other treatment facilities;
- b. Use of other discharge locations;
- c. Water reuse or recycle;
- d. Process and treatment alternatives;
- e. On-site or sub-surface disposal;
- f. Any other examination of alternatives to lowering water quality to which the cabinet and the applicant can agree;
- g. The positive or beneficial effect of the facility on an existing environmental or public health problem;
- h. The increase or avoidance of a decrease in employment;
- i. The increase in production level;
- j. The increase in operational efficiency;
- k. Industrial or commercial benefit to the community; and
- l. Any other economic or social benefit to the community.

6. A permit applicant who has failed to demonstrate to the satisfaction of the cabinet the necessity for lowering water quality shall meet the effluent limitations required by this paragraph and additional requirements of the Kentucky Pollution Discharge Elimination System program.

7. A permit applicant who demonstrates to the satisfaction of the cabinet the necessity for lowering water quality shall meet the water quality based limitations as outlined in 401 KAR 5:031.

(4) Impaired water.

(a) Categorization criteria. A surface water categorized as impaired for applicable designated uses shall be a water identified pursuant to 33 U.S.C. 1315. Surface water categorized as impaired shall be assessed by the cabinet as not fully supporting any applicable designated uses. A surface water shall not be categorized as impaired water if the surface water is listed as an outstanding state resource water in 401 KAR 5:026.

(b) Implementation procedure. All existing uses shall be protected and the level of water quality necessary to protect those existing uses shall be assured in impaired water. The process to allow a discharge into an impaired water and to assure protection of the water is regulated by the requirements in the Kentucky Pollution Discharge Elimination System Program.

Section 2. Procedure for Recategorizing Water. This section shall apply to the recategorization of surface water to outstanding national resource water and exceptional water. The redesignation of water to outstanding state resource water shall be governed by the procedures in 401 KAR 5:026.

(1) The cabinet may propose to recategorize certain water to outstanding national resource water and exceptional water.

(a) If the cabinet proposes to recategorize these waters, it shall provide notice and an opportunity for public hearing.

(b) The cabinet shall provide the documentation requirements of this section for those surface waters it proposes to recategorize.

(2) A person may request recategorization of a surface water to an outstanding national resource water or exceptional water by filing a petition with the cabinet.

(a) The petition shall include the name and address of the petitioner and the information and documentation necessary to recategorize the

particular water as required by subsection (4) of this section;

(b) The petitioner shall have the burden of proof that the recategorization is appropriate.

(c) The cabinet shall provide notice of the petition and an opportunity for a public hearing.

(d) The cabinet shall review the petition, supporting documentation, and any comments received from the public to determine if the proposed water qualifies for recategorization.

(e) The cabinet shall document the determination to grant or deny recategorization as a result of a petition, and shall provide a copy of the decision to the petitioner and other interested parties.

(3) If a water is to be recategorized, the cabinet shall publish notice of the recategorization. Any permit issued after the date of publication shall be issued with limitations based on the new category. When the cabinet reviews its water quality standards pursuant to the provisions of Section 303 of the Clean Water Act, the cabinet shall propose to have all recategorized water promulgated as an amendment to this administrative regulation.

(4) The following information, documentation, and data shall support a petition for recategorization:

(a) A petition for outstanding national resource water shall include:

1. A United States Geological Survey 7.5 minute topographic map or its equivalent as approved by the cabinet showing those surface waters to be recategorized including a description consisting of a river mile index with any existing and proposed discharge points;

2. Existing uses and water quality data for the surface water for which the recategorization is proposed. If adequate data are unavailable, additional studies may be required by the cabinet;

3. Descriptions of general land uses and specific land uses adjacent to the surface water for which the recategorization is proposed;

4. The existing and designated uses of the water upstream and downstream of the proposed recategorized water;

5. General physical characteristics of the surface water including width, depth, bottom composition, and slope;

6. The frequency of occasions when there is no natural flow in the surface water, and the $7Q_{10}$ and harmonic mean flow values for the surface water and adjacent surface waters;

7. An assessment of the existing and potential aquatic life habitat in the surface water under consideration and the adjacent upstream surface waters. The existing aquatic life shall be documented including the occurrence of individuals or populations, indices of diversity and well-being, and abundance of species of any unique native biota;

8. A documented rationale as to why the water qualify for the recategorization; and

9. The rationale used to support the national significance of the water.

(b) A petition for exceptional water shall include the following:

1. A United States Geological Survey 7.5 minute topographic map or its equivalent as approved by the cabinet showing the surface water to be recategorized including a description consisting of a river mile index with existing and proposed discharge points;

2. Descriptions of general land uses, including mining, agricultural, recreational, low, medium, and high density residential, commercial, and industrial, and specific land uses adjacent to the surface water for which the recategorization is proposed;

3. The frequency of occasions when there is no natural flow in the surface water, and the $7Q_{10}$ and annual mean flow values for the surface water; and

4. Fish or benthic macroinvertebrate collection data and an Index of Biotic Integrity or Macroinvertebrate Bioassessment Index calculation from a waterbody if criteria specified in Section 1(2)(a)3 of this administrative regulation are utilized.

Section 3. Incorporation by Reference. (1) The following material is incorporated by reference:

(a) "Development and Application of the Kentucky Index of Biotic Integrity (KIBI)", 2003, Kentucky Division of Water, Environmental and Public Protection Cabinet;

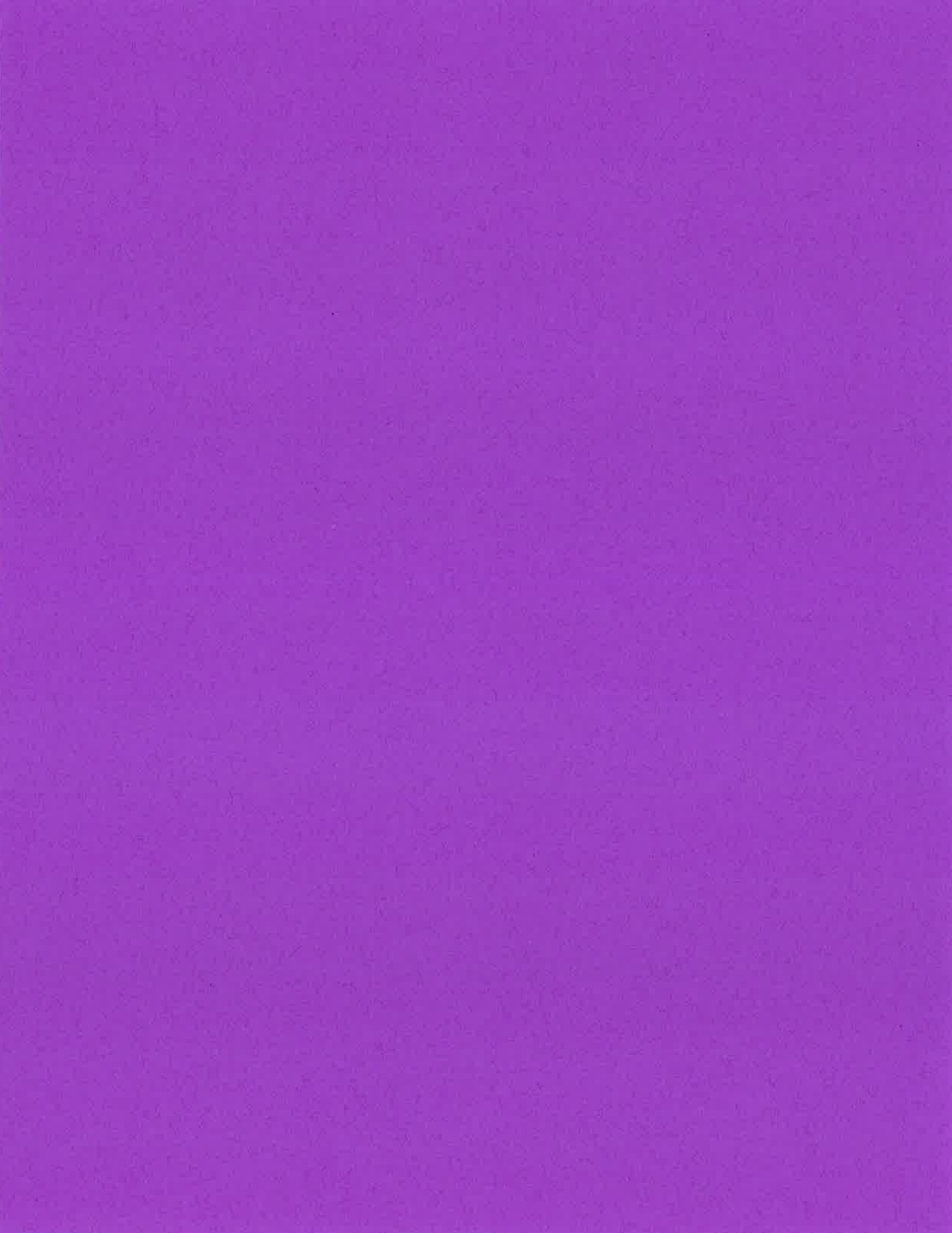
(b) "The Kentucky Macroinvertebrate Bioassessment Index", 2003, Kentucky Division of Water, Environmental and Public Protection Cabinet;

(c) "Interim Economic Guidance for Water Quality Standards Workbook", EPA, March 1995 Publication EPA-823-B-95-002, U.S. Environmental Protection Agency, Office of Water, Washington, D.C.; and

(d) "401 KAR 5:030 Antidegradation Implementation Procedures Process Flow Chart", May 25, 2004, KPDES Branch, Kentucky Division of Water, Kentucky Department for Environmental Protection.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Water, 14 Reilly Road, Frankfort, Kentucky, Monday through Friday, 8 a.m. to 4:30 p.m. (21 Ky.R. 2843; Am. 89; 280; eff. 7-12-95; 26 Ky.R. 145; 819; 1144; eff. 12-8-

99; 30 Ky.R. 1024; 1801; 31 Ky.R. 558; eff. 9-8-2004; TAm eff. 8-9-2007, Recodified from 401 KAR 5:030, 6-11-08.)



401 KAR 10:031. Surface water standards.

RELATES TO: KRS 146.200-146.360, 146.410-146.535, 146.550-146.570, 146.600-146.619, 146.990, 224.01-010, 224.01-400, 224.16-050, 224.16-070, 224.70-100-224.70-140, 224.71-100-224.71-145, 224.73-100-224.73-120, EO 2008-507, 2008-531

STATUTORY AUTHORITY: KRS 146.220, 146.241, 146.270, 146.410, 146.450, 146.460, 146.465, 224.10-100, 224.16-050, 224.16-060, 224.70-100, 224.70-110, 40 C.F.R. Part 131, 16 U.S.C. 1271-1287, 1531-1544, 33 U.S.C. 1311, 1313, 1314, 1341

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 requires the cabinet to develop and conduct a comprehensive program for the management of water resources and to provide for the prevention, abatement, and control of water pollution. EO 2008-507 and 2008-531, effective June 16, 2008, abolish the Environmental and Public Protection Cabinet and establish the new Energy and Environment Cabinet. This administrative regulation and 401 KAR 10:001, 10:026, 10:029, and 10:030 establish procedures to protect the surface waters of the commonwealth, and thus protect water resources. This administrative regulation establishes water quality standards that consist of designated legitimate uses of the surface waters of the commonwealth and the associated water quality criteria necessary to protect those uses. These water quality standards are minimum requirements that apply to all surface waters in the commonwealth of Kentucky in order to maintain and protect them for designated uses. These water quality standards are subject to periodic review and revision in accordance with the Clean Water Act, 33 U.S.C. 1251-1387, 40 C.F.R. 131, and KRS Chapter 224.

Section 1. Nutrient Limits. In lakes and reservoirs and their tributaries, and other surface waters where eutrophication problems may exist, nitrogen, phosphorus, carbon, and contributing trace element discharges shall be limited in accordance with:

- (1) The scope of the problem;
- (2) The geography of the affected area; and
- (3) Relative contributions from existing and proposed sources.

Section 2. Minimum Criteria Applicable to All Surface Waters. (1) The following minimum water quality criteria shall be applicable to all surface waters including mixing zones, with the exception that toxicity to aquatic life in mixing zones shall be subject to the provisions of 401 KAR 10:029, Section 4. Surface waters shall not be aesthetically or otherwise degraded by substances that:

- (a) Settle to form objectionable deposits;
 - (b) Float as debris, scum, oil, or other matter to form a nuisance;
 - (c) Produce objectionable color, odor, taste, or turbidity;
 - (d) Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life;
 - (e) Produce undesirable aquatic life or result in the dominance of nuisance species;
 - (f) 1. Cause fish flesh tainting.
2. The concentration of phenol shall not exceed 300 µg/l as an instream value.

(2) The water quality criteria for the protection of human health related to fish consumption in Table 1 of Section 6 of this administrative regulation are applicable to all surface water at the edge of the assigned mixing zones except for those points where water is withdrawn for domestic water supply use.

(a) The criteria are established to protect human health from the consumption of fish tissue, and shall not be exceeded.

(b) For those substances associated with a cancer risk, an acceptable risk level of not more than one (1) additional cancer case in a population of 1,000,000 people, or 1×10^{-6} shall be utilized to establish the allowable concentration.

Section 3. Use Designations and Associated Criteria. (1) Surface waters may be designated as having one (1) or more legitimate uses and associated criteria protective of those uses. Those uses are listed in 401 KAR 10:026. Nothing in this administrative regulation shall be construed to prohibit or impair the legitimate beneficial uses of these waters. The criteria in Sections 2, 4, 6, and 7 of this administrative regulation represent minimum conditions necessary to:

- (a) Protect surface waters for the indicated use; and
- (b) Protect human health from fish consumption.

(2) On occasion, surface water quality may be outside of the limits established to protect designated uses because of natural conditions. If this occurs during periods when stream flows are below the flow that is used by the cabinet to establish effluent limitations for wastewater treatment facilities, a discharger shall not be considered a contributor to instream violations of water quality standards, if treatment results in

compliance with permit requirements.

(3) Stream flows for water quality-based permits. The following stream flows shall be utilized if deriving KPDES permit limitations to protect surface waters for the listed uses and purposes:

- (a) Aquatic life protection shall be $7Q_{10}$;
- (b) Water-based recreation protection shall be $7Q_{10}$;
- (c) Domestic water supply protection shall be determined at points of withdrawal as:
 - 1. The harmonic mean for cancer-linked substances; and
 - 2. $7Q_{10}$ for noncancer-linked substances;
- (d) Human health protection from fish consumption and for changes in radionuclides shall be the harmonic mean; and
- (e) Protection of aesthetics shall be $7Q_{10}$.

Section 4. Aquatic Life. (1) Warm water aquatic habitat. The following parameters and associated criteria shall apply for the protection of productive warm water aquatic communities, fowl, animal wildlife, arboreous growth, agricultural, and industrial uses:

- (a) Natural alkalinity as CaCO_3 shall not be reduced by more than twenty-five (25) percent.
 - 1. If natural alkalinity is below twenty (20) mg/l CaCO_3 , there shall not be a reduction below the natural level.
 - 2. Alkalinity shall not be reduced or increased to a degree that may adversely affect the aquatic community;
- (b) pH shall not be less than six and zero-tenths (6.0) nor more than nine and zero-tenths (9.0) and shall not fluctuate more than one and zero-tenths (1.0) pH unit over a period of twenty-four (24) hours;
- (c) Flow shall not be altered to a degree that will adversely affect the aquatic community;
- (d) Temperature shall not exceed thirty-one and seven-tenths (31.7) degrees Celsius (eighty-nine (89) degrees Fahrenheit).
 - 1. The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.
 - 2. The cabinet may determine allowable surface water temperatures on a site-specific basis utilizing available data that shall be based on the effects of temperature on the aquatic biota that utilize specific surface waters of the commonwealth and that may be affected by person-induced temperature changes.
 - a. Effects on downstream uses shall also be considered in determining site-specific temperatures.
 - b. Values in the following table are guidelines for surface water temperature.

Month/Date	Period Average		Instantaneous Maximum	
	(°F)	(°C)	(°F)	(°C)
January 1-31	45	7	50	10
February 1-29	45	7	50	10
March 1-15	51	11	56	13
March 16-31	54	12	59	15
April 1-15	58	14	64	18
April 16-30	64	18	69	21
May 1-15	68	20	73	23
May 16-31	75	24	80	27
June 1-15	80	27	85	29
June 16-30	83	28	87	31
July 1-31	84	29	89	32
August 1-31	84	29	89	32
September 1-15	84	29	87	31
September 16-30	82	28	86	30
October 1-15	77	25	82	28
October 16-31	72	22	77	25
November 1-30	67	19	72	22
December 1-31	52	11	57	14

3. A successful demonstration concerning thermal discharge limits carried out under Section 316(a) of the Clean Water Act, 33 U.S.C. 1326, shall constitute compliance with the temperature requirements of this subsection. A successful demonstration assures the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife in or on the water into which the discharge is made;

(e) Dissolved oxygen.

1.a. Dissolved oxygen shall be maintained at a minimum concentration of five and zero-tenths (5.0) mg/l as a twenty-four (24) hour average in water with WAH use;

b. The instantaneous minimum shall not be less than four and zero-tenths (4.0) mg/l in water with WAH use.

2. The dissolved oxygen concentration shall be measured at middepth in waters having a total depth of ten (10) feet or less and at representative depths in other waters;

(f) Total dissolved solids or specific conductance. Total dissolved solids or specific conductance shall not be changed to the extent that the indigenous aquatic community is adversely affected;

(g) Total suspended solids. Total suspended solids shall not be changed to the extent that the indigenous aquatic community is adversely affected;

(h) Settleable solids. The addition of settleable solids that may alter the stream bottom so as to adversely affect productive aquatic communities shall be prohibited;

(i) Ammonia. The concentration of the un-ionized form shall not be greater than 0.05 mg/l at any time instream after mixing. Un-ionized ammonia shall be determined from values for total ammonia-N, in mg/l, pH and temperature, by means of the following equation:

$$Y = 1.2 (\text{Total ammonia-N}) / (1 + 10^{pK_a - pH})$$

$$pK_a = 0.0902 + (2730 / (273.2 + T_c))$$

Where:

T_c = temperature, degrees Celsius.

Y = un-ionized ammonia (mg/l);

(j) Toxics.

1. The allowable instream concentration of toxic substances, or whole effluents containing toxic substances, which are noncumulative or nonpersistent with a half-life of less than ninety-six (96) hours, shall not exceed:

a. One-tenth (0.1) of the ninety-six (96) hour median lethal concentration (LC_{50}) of representative indigenous or indicator aquatic organisms; or

b. A chronic toxicity unit of 1.00 utilizing the twenty-five (25) percent inhibition concentration, or LC_{25} .

2. The allowable instream concentration of toxic substances, or whole effluents containing toxic substances, which are bioaccumulative or persistent, including pesticides, if not specified elsewhere in this section, shall not exceed:

a. 0.01 of the ninety-six (96) hour median lethal concentration (LC_{50}) of representative indigenous or indicator aquatic organisms; or

b. A chronic toxicity unit of 1.00 utilizing the IC_{25} .

3. In the absence of acute criteria for pollutants listed in Table 1 of Section 6 of this administrative regulation, for other substances known to be toxic but not listed in this administrative regulation, or for whole effluents that are acutely toxic, the allowable instream concentration shall not exceed the LC_1 or one-third (1/3) LC_{50} concentration derived from toxicity tests on representative indigenous or indicator aquatic organisms or exceed three-tenths (0.3) acute toxicity units.

4. If specific application factors have been determined for a toxic substance or whole effluent such as an acute to chronic ratio or water effect ratio, they may be used instead of the one-tenth (0.1) and 0.01 factors listed in this subsection upon demonstration by the applicant that the application factors are scientifically defensible.

5. Allowable instream concentrations for specific pollutants for the protection of warm water aquatic habitat are listed in Table 1 of Section 6 of this administrative regulation. These concentrations are based on protecting aquatic life from acute and chronic toxicity and shall not be exceeded; and

(k) Total residual chlorine. Instream concentrations for total residual chlorine shall not exceed an acute criteria value of nineteen (19) $\mu\text{g/l}$ or a chronic criteria value of eleven (11) $\mu\text{g/l}$.

(2) Cold water aquatic habitat. The following parameters and criteria are for the protection of productive cold water aquatic communities and streams that support trout populations, whether self-sustaining or reproducing, on a year-round basis. The criteria adopted for the protection of warm water aquatic life also apply to the protection of cold water habitats with the following additions:

(a) Dissolved oxygen.

1. A minimum concentration of six and zero-tenths (6.0) mg/l as a twenty-four (24) hour average and five and zero-tenths (5.0) mg/l as an

instantaneous minimum shall be maintained.

2. In lakes and reservoirs that support trout, the concentration of dissolved oxygen in waters below the epilimnion shall be kept consistent with natural water quality; and

(b) Temperature. Water temperature shall not be increased through human activities above the natural seasonal temperatures.

Section 5. Domestic Water Supply Use. Maximum allowable in-stream concentrations for specific substances, to be applicable at the point of withdrawal, as established in 401 KAR 10:026, Section 5(2)(b), Table B, for use for domestic water supply from surface water sources are specified in Table 1 of Section 6 of this administrative regulation and shall not be exceeded.

Section 6. Pollutants. (1) Allowable instream concentrations of pollutants are listed in Table 1 of this section.

Table 1					
Pollutant	CAS ¹ Number	Water Quality Criteria µg/L ²			
		Human Health:		Warm Water Aquatic Habitat ³ :	
		DWS ⁴	Fish ⁵	Acute ⁶	Chronic ⁷
Acenaphthene	83329	670	990	-	-
Acrolein	107028	190	290	-	-
Acrylonitrile	107131	0.051	0.25	-	-
Aldrin	309002	0.000049	0.000050	3.0	-
alpha-BHC	319846	0.0026	0.0049	-	-
alpha-Endosulfan	959988	62	89	0.22	0.056
Anthracene	120127	8,300	40,000	-	-
Antimony	7440360	5.6	640	-	-
Arsenic	7440382	10.0	-	340	150
Asbestos	1332214	7 million fibers/L	-	-	-
Barium	7440393	1,000	-	-	-
Benzene	71432	2.2	51	-	-
Benzidine	92875	0.000086	0.00020	-	-
Benzo(a)anthracene	56553	0.0038	0.018	-	-
Benzo(a)pyrene	50328	0.0038	0.018	-	-
Benzo(b)fluoranthene	205992	0.0038	0.018	-	-
Benzo(k)fluoranthene	207089	0.0038	0.018	-	-
Beryllium	7440417	4	-	-	-
Beta-BHC	319857	0.0091	0.017	-	-
Beta-Endosulfan	33213659	62	89	0.22	0.056
bis(chloromethyl)ether	542881	0.00010	0.00029	-	-
bis(2-chloroethyl)ether	111444	0.030	0.53	-	-
bis(2-chloroisopropyl)ether	108601	1,400	65,000	-	-
bis(2-ethylhexyl)phthalate	117817	1.2	2.2	-	-
Bromoform	75252	4.3	140	-	-
Butylbenzyl phthalate	85687	1,500	1,900	-	-
Cadmium	7440439	5	-	e(1.0166 (In Hard*)-3.924)	e(0.7409 (In Hard*)- 4.719)
Carbon tetrachloride	56235	0.23	1.6	-	-
Chlordane	57749	0.00080	0.00081	2.4	0.0043
Chloride	16887006	250,000	-	1,200,000	600,000
Chlorobenzene	108907	130	1600	-	-

Chlorodibromomethane	124481	0.40	13	-	-
Chloroform	67663	5.7	470	-	-
Chlorpyrifos	2921882	-	-	0.083	0.041
Chromium	N/A	100	-	-	-
Chromium (III)	16065831	-	-	e(0.8190 (In Hard*)+ 3.7256)	e(0.8190 (In Hard*)+ 0.6848)
Chromium (VI)	18540299	-	-	16	11
Chrysene	218019	0.0038	0.018	-	-
Color	N/A	75 Platinum Cobalt Units	-	-	-
Copper	7440508	1,300	-	e(0.9422 (In Hard*)- 1.700)	e(0.8545 (In Hard*)- 1.702)
Cyanide, Free	57125	140	140	22	5.2
Demeton	8065483	-	-	-	0.1
Diazinon	333415	-	-	0.17	0.17
Dibenzo(a,h)anthracene	53703	0.0038	0.018	-	-
Dichlorobromomethane	75274	0.55	17	-	-
Dieldrin	60571	0.000052	0.000054	0.24	0.056
Diethyl phthalate	84662	17,000	44,000	-	-
Dimethyl phthalate	131113	270,000	1,100,000	-	-
Di-n-butyl phthalate	84742	2,000	4,500	-	-
Dinitrophenols	25550587	69	5300	-	-
Endosulfan sulfate	1031078	62	89	-	-
Endrin	72208	0.059	0.060	0.086	0.036
Endrin aldehyde	7421934	0.29	0.30	-	-
Ethylbenzene	100414	530	2100	-	-
Fluoranthene	206440	130	140	-	-
Fluorene	86737	1,100	5,300	-	-
Fluoride	N/A	4,000	-	-	-
Guthion	86500	-	-	-	0.01
Heptachlor	76448	0.000079	0.000079	0.52	0.0038
Heptachlor epoxide	1024573	0.000039	0.000039	0.52	0.0038
Hexachlorobenzene	118741	0.00028	0.00029	-	-
Hexachlorobutadiene	87683	0.44	18	-	-
Hexachlorocyclo-hexane-Technical	319868	0.0123	0.0414	-	-
Hexachlorocyclopentadiene	77474	40	1100	-	-
Hexachloroethane	67721	1.4	3.3	-	-
Ideno(1,2,3-cd)pyrene	193395	0.0038	0.018	-	-
Iron ⁸	7439896	300	-	4,000	1,000
Isophorone	78591	35.0	960	-	-
Lead	7439921	15	-	e(1.273 (In Hard*)- 1.460)	e(1.273 (In Hard*)- 4.705)
Lindane (gamma-BHC)	58899	0.98	1.8	0.95	

Malathion	121755	-	-	-	0.1
Mercury	7439976	2.0	0.051	1.4	0.77
Methylmercury	22967926		0.3 mg/Kg		
Methoxychlor	72435	100	-	-	0.03
Methylbromide	74839	47	1,500	-	-
Methylene Chloride	75092	4.6	590	-	-
Mirex	2385855	-	-	-	0.001
Nickel	7440020	610	4,600	e(0.8460 (In Hard*)+ 2.255)	e(0.8460 (In Hard*)+ 0.0584)
Nitrate (as N)	14797558	10,000	-	-	-
Nitrobenzene	98953	17	690	-	-
Nitrosamines, Other	N/A	0.0008	1.24	-	-
N-Nitrosodibutylamine	924163	0.0063	0.22	-	-
N-Nitrosodiethylamine	55185	0.0008	1.24	-	-
N-Nitrosodimethylamine	62759	0.00069	3.0	-	-
N-Nitrosodi-n-Propylamine	621647	0.0050	0.51	-	-
N-Nitrosodiphenylamine	86306	3.3	6.0	-	-
N-Nitrosopyrrolidine	930552	0.016	34	-	-
Nonylphenol	1044051			28	6.6
Parathion	56382	-	-	0.065	0.013
Pentachlorobenzene	608935	1.4	1.5	-	-
Pentachlorophenol	87865	0.27	3.0	e(1.005 (pH)-4.869)	e(1.005 (pH)-5.134)
Phenol	108952	21,000	1,700,000	-	-
Polychlorinated Biphenyls (PCBs)	N/A	0.000064	0.000064	-	0.0014
Pyrene	129000	830	4,000	-	-
Selenium	7782492	170	4,200	20	5.0
Silver	7440224	-	-	e(1.72 (In Hard*)-6 .59)	-
Sulfate	N/A	250,000	-	-	-
Hydrogen Sulfide, Undissociated	7783064	-	-	-	2.0
Tetrachloroethylene	127184	0.69	3.3	-	-
Thallium	7440280	0.24	0.47	-	-
Toluene	108883	1300	15,000	-	-
Total Dissolved Solids	N/A	250,000	-	-	-
Toxaphene	8001352	0.00028	0.00028	0.73	0.0002
Tributyltin (TBT)				0.46	0.072
Trichloroethylene	79016	2.5	30	-	-
Vinyl Chloride	75014	0.025	2.4	-	-
Zinc	7440666	7,400	26,000	e(0.8473 (In Hard*)+ 0.884)	e(0.8473 (In Hard*)+ 0.884)
1,1-dichloroethylene	75354	330	7100	-	-
1,1,1-trichloroethane	71556	200	-	-	-
1,1,2-trichloroethane	79005	0.59	16	-	-

1,1,2,2-tetrachloroethane	79345	0.17	4.0	-	-
1,2-dichlorobenzene	95501	420	1300	-	-
1,2-dichloroethane	107062	0.38	37	-	-
1,2-dichloropropane	78875	0.50	15	-	-
1,2-diphenylhydrazine	122667	0.036	0.20	-	-
1,2-trans-dichloroethylene	156605	140	10,000	-	-
1,2,4-trichlorobenzene	120821	35	70	-	-
1,2,4,5-tetrachlorobenzene	95943	0.97	1.1	-	-
1,3-dichlorobenzene	541731	320	960	-	-
1,3-dichloropropene	542756	0.34	21	-	-
1,4-dichlorobenzene	106467	63	190	-	-
2-chloronaphthalene	91587	1,000	1,600	-	-
2-chlorophenol	95578	81	150	-	-
2-methyl-4,6-dinitrophenol	534521	13	280	-	-
2,3,7,8-TCDD (Dioxin)	1746016	5.0 E - 9	5.1 E - 9	-	-
2,4-D	94757	100	-	-	-
2,4-dichlorophenol	120832	77	290	-	-
2,4-dimethylphenol	105679	380	850	-	-
2,4-dinitrophenol	51285	69	5,300	-	-
2,4-dinitrotoluene	121142	0.11	3.4	-	-
2,4,5-TP (Silvex)	93721	10	-	-	-
2,4,5-trichlorophenol	95954	1,800	3,600	-	-
2,4,6-trichlorophenol	88062	1.4	2.4	-	-
3,3'-dichlorobenzidine	91941	0.021	0.028	-	-
4,4'-DDD	72548	0.00031	0.00031	-	-
4,4'-DDE	72559	0.00022	0.00022	-	-
4,4'-DDT	50293	0.00022	0.00022	1.1	0.001

¹ CAS = Chemical Abstracts Service.

² Water quality criteria in µg/L unless reported in different units.

³ Metal concentrations shall be total recoverable metals to be measured in an unfiltered sample, unless it can be demonstrated that a more appropriate analytical technique is available that provides a measurement of that portion of the metal present which causes toxicity to aquatic life.

⁴ DWS = Domestic Water Supply Source.

⁵ Fish = Fish Consumption.

⁶ Acute criteria = protective of aquatic life based on one (1) hour exposure that does not exceed the criterion for a given pollutant.

⁷ Chronic = protective of aquatic life based on ninety-six (96) hour exposure that does not exceed the criterion of a given pollutant more than once every three (3) years on the average.

⁸ The chronic criterion for iron shall not exceed three and five tenths (3.5) mg/l (thirty-five hundred µg/l) if aquatic life has not been shown to be adversely affected.

*Hard = Hardness as mg/l CaCO₃.

(2) The following additional criteria for radionuclides shall apply for Domestic Water Supply use:

(a) The gross total alpha particle activity, including radium-226 but excluding radon and uranium, shall not exceed fifteen (15) pCi/l;

(b) Combined radium-226 and radium-228 shall not exceed five (5) pCi/l. Specific determinations of radium-226 and radium-228 are not necessary if dissolved gross alpha particle activity does not exceed five (5) pCi/l;

(c) The concentration of total gross beta particle activity shall not exceed fifty (50) pCi/l;

(d) The concentration of tritium shall not exceed 20,000 pCi/l;

- (e) The concentration of total Strontium-90 shall not exceed eight (8) pCi/l; or
- (f) The concentration of uranium shall not exceed thirty (30) µg/l.

Section 7. Recreational Waters. (1) Primary contact recreation water. The following criteria shall apply to waters designated as primary contact recreation use during the primary contact recreation season of May 1 through October 31:

(a) Fecal coliform content or *Escherichia coli* content shall not exceed 200 colonies per 100 ml or 130 colonies per 100 ml respectively as a geometric mean based on not less than five (5) samples taken during a thirty (30) day period. Content also shall not exceed 400 colonies per 100 ml in twenty (20) percent or more of all samples taken during a thirty (30) day period for fecal coliform or 240 colonies per 100 ml for *Escherichia coli*. Fecal coliform criteria listed in subsection (2)(a) of this section shall apply during the remainder of the year; and

(b) pH shall be between six and zero-tenths (6.0) to nine and zero-tenths (9.0) and shall not change more than one and zero-tenths (1.0) pH unit within this range over a period of twenty-four (24) hours.

(2) Secondary contact recreation water. The following criteria shall apply to waters designated for secondary contact recreation use during the entire year:

(a) Fecal coliform content shall not exceed 1,000 colonies per 100 ml as a thirty (30) day geometric mean based on not less than five (5) samples; nor exceed 2,000 colonies per 100 ml in twenty (20) percent or more of all samples taken during a thirty (30) day period; and

(b) pH shall be between six and zero-tenths (6.0) to nine and zero-tenths (9.0) and shall not change more than one and zero-tenths (1.0) pH unit within this range over a period of twenty-four (24) hours.

Section 8. Outstanding State Resource Waters. This designation category includes certain unique waters of the commonwealth.

(1) Water for inclusion.

(a) Automatic inclusion. The following surface waters shall automatically be included in this category:

1. Waters designated under the Kentucky Wild Rivers Act, KRS 146.200-146.360;
2. Waters designated under the Federal Wild and Scenic Rivers Act, 16 U.S.C. 1271-1287;
3. Waters identified under the Kentucky Nature Preserves Act, KRS 146.410-146.530, which are contained within a formally dedicated nature preserve or are published in the registry of natural areas in accordance with 400 KAR 2:080 and concurred upon by the cabinet; and
4. Waters that support federally recognized endangered or threatened species under the Endangered Species Act of 1973, as amended, 16 U.S.C. 1531-1544.

(b) Permissible consideration. Other surface waters shall be considered for inclusion in this category if:

1. The surface waters flow through or are bounded by state or federal forest land, or are of exceptional aesthetic or ecological value or are within the boundaries of national, state, or local government parks, or are a part of a unique geological or historical area recognized by state or federal designation; or

2. The surface water is a component part of an undisturbed or relatively undisturbed watershed that can provide basic scientific data and possess outstanding water quality characteristics, or fulfill two (2) of the following criteria:

- a. Support a diverse or unique native aquatic flora or fauna;
- b. Possess physical or chemical characteristics that provide an unusual and uncommon aquatic habitat; or
- c. Provide a unique aquatic environment within a physiographic region.

(2) Outstanding state resource waters protection. The designation of certain waters as outstanding state resource waters shall fairly and fully reflect those aspects of the waters for which the designation is proposed. The cabinet shall determine water quality criteria for these waters as follows:

(a) At a minimum, the criteria of Section 2 and Table 1 of Section 6 of this administrative regulation and the appropriate criteria associated with the stream use designation assignments in 401 KAR 10:026, shall be applicable to these waters.

(b) Outstanding state resource waters that are listed as Exceptional Waters in 401 KAR 10:030, Section 1(2) shall have dissolved oxygen maintained at a minimum concentration of six and zero-tenths (6.0) mg/l as a twenty-four (24) hour average and an instantaneous minimum concentration of not less than five and zero-tenths (5.0) mg/l.

(c) 1. If the values identified for an outstanding state resource water are dependent upon or related to instream water quality, the cabinet shall review existing water quality criteria and determine if additional criteria or more stringent criteria are necessary for protection, and evaluate the need for the development of additional data upon which to base the determination.

2. Existing water quality and habitat shall be maintained and protected in those waters designated as outstanding state resource waters that support federally threatened and endangered species of aquatic organisms, unless it can be demonstrated that lowering of water quality

or a habitat modification will not have a harmful effect on the threatened or endangered species that the water supports.

(d) Adoption of more protective criteria in accordance with this section shall be listed with the respective stream segment in 401 KAR 10:026.

(3) **Determination of designation.**

(a) A person may present a proposal to designate certain waters under this section. Documentation requirements in support of an outstanding state resource water proposal shall contain those elements outlined in 401 KAR 10:026, Section 3(3)(a) through (h).

(b)1. The cabinet shall review the proposal and supporting documentation to determine whether the proposed waters qualify as outstanding state resource waters within the criteria established by this administrative regulation.

2. The cabinet shall document the determination to deny or to propose redesignation, and a copy of the decision shall be served upon the petitioner and other interested parties.

(c) After considering all of the pertinent data, a redesignation, if appropriate, shall be made pursuant to 401 KAR 10:026.

Section 9. Water Quality Criteria for the Main Stem of the Ohio River. (1) The following criteria apply to the main stem of the Ohio River from its juncture with the Big Sandy River at River Mile 317.1 to its confluence with the Mississippi River, and shall not be exceeded.

(2) These waters shall be subject to all applicable provisions of 401 KAR 10:001, 10:026, 10:029, 10:030, and this administrative regulation, except for those criteria in paragraphs (a) and (b) of this subsection.

(a) Dissolved oxygen. Concentrations shall average at least five and zero-tenths (5.0) mg/l per calendar day and shall not be less than four and zero-tenths (4.0) mg/l except during the April 15 - June 15 spawning season when a minimum of five and one-tenth (5.1) mg/l shall be maintained.

(b) Maximum allowable instream concentrations for nitrite-nitrogen for the protection of human health shall be one and zero-tenths (1.0) mg/l and shall be met at the edge of the assigned mixing zone.

Section 10. Exceptions to Criteria for Specific Surface Waters. (1) The cabinet may grant exceptions to the criteria contained in Sections 2, 4, 6, 7, 8, and 9 of this administrative regulation for specific surface water upon demonstration by an applicant that maintenance of applicable water quality criteria is not attainable or scientifically valid but the use designation is still appropriate.

(2) The analysis shall show that the water quality criteria cannot be reasonably achieved, either on a seasonal or year-round basis due to natural conditions or site-specific factors differing from the conditions used to derive criteria in Sections 2, 4, 6, 7, 8, and 9 of this administrative regulation.

(a) Site-specific criteria shall be developed by the applicant utilizing toxicity tests, indicator organisms, and application factors that shall be consistent with those outlined in Chapter 3 of Water Quality Standards Handbook, EPA, 1994.

(b) In addition, an applicant shall supply the documentation listed in 401 KAR 10:026, Section 3.

(3) An exception to criteria listed in Table 1 of Section 6 of this administrative regulation for the protection of human health from the consumption of fish tissue may be granted if it is demonstrated that natural, ephemeral, intermittent, or low flow conditions or water levels preclude the year-round support of a fishery, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges.

(4) Before granting an exception to water quality criteria, the cabinet shall ensure that the water quality standards of downstream waters shall be attained and maintained.

(5) All exceptions to water quality criteria shall be subject to review at least every three (3) years.

(6) Exceptions to water quality criteria shall be adopted as an administrative regulation by listing them with the respective surface water in 401 KAR 10:026.

Section 11. Exceptions to Criteria for Individual Dischargers. (1) An exception to criteria may be granted to an individual discharger based on a demonstration by the discharger, that KPDES permit compliance with existing instream criteria cannot be attained because of factors specified in 401 KAR 10:026, Section 2(4)(a) through (f).

(2) The demonstration shall include an assessment of alternative pollution control strategies and biological assessments that indicated designated uses are being met.

(3) Before granting an exception, the cabinet shall ensure that the water quality standards of downstream waters shall be attained and maintained.

(4) All exceptions shall be submitted to the cabinet for review at least every three (3) years. Upon review, the discharger shall demonstrate

to the cabinet the effort the discharger made to reduce the pollutants in the discharge to levels that would achieve existing applicable water quality criteria.

(5) The highest level of effluent quality that can be economically and technologically achieved shall be ensured while the exception is in effect.

(6) The Kentucky Pollution Discharge Elimination System permitting program shall be the mechanism for the review and public notification of intentions to grant exceptions to criteria.

Section 12. Incorporation by Reference. (1) The following material is incorporated by reference:

(a) "Water Quality Standards Handbook-Chapter 3", EPA August 1994, Publication EPA-823-B-94-005a, U.S. Environmental Protection Agency, Office of Water, Washington, D.C.; and

(b) "Interim Economic Guidance for Water Quality Standards Workbook", EPA March 1995, Publication EPA-823-B-95-002, U.S. Environmental Protection Agency, Office of Water, Washington, D.C.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky, Monday through Friday, 8 a.m. to 4:30 p.m. (5 Ky.R. 829; Am. 6 Ky.R. 344; eff. 12-5-79; 11 Ky.R. 1144; 1384; eff. 4-9-85; 16 Ky.R. 838; 1370; 2666; eff. 5-31-90; 18 Ky.R. 1388; 2331; eff. 1-27-92; 26 Ky.R. 150; 824; 1148; eff. 12-8-99; 30 Ky.R. 1035; 1813; eff. 9-8-2004; TAm eff. 8-9-2007, Recodified from 401 KAR 5:031; 35 Ky.R. 177; 930; 2723; eff. 7-6-2009.)